

तमसो मा ज्योतिर्गमय

SANTINIKETAN
VISWA BHARATI
LIBRARY

959.5

W 73

MALAYA
THE STRAITS SETTLEMENTS AND THE
FEDERATED AND UNFEDERATED
MALAY STATES

WORKS BY R. O. WINSTEDT

MALAY GRAMMAR *Clarendon Press*

AN ENGLISH-MALAY DICTIONARY
2nd Edition *Kelly & Walsh, Singapore*

COLLOQUIAL MALAY: A Simple
Grammar with Conversations. 2nd Edition
Kelly & Walsh, Singapore

A DICTIONARY OF COLLOQUIAL
MALAY, MALAY-ENGLISH AND
ENGLISH-MALAY
Kelly & Walsh, Singapore

MALAYAN MEMORIES, illustrated by
D. Aldworth *Kelly & Walsh, Singapore*

By R. O. WINSTEDT and C. O. BLAGDEN

A MALAY READER *Clarendon Press*

MALAYA

THE STRAITS SETTLEMENTS AND
THE FEDERATED AND
UNFEDERATED MALAY STATES

EDITED BY

R. O. WINSTEDT, M.A., D.LITT. (OXON.)
(*Malayan Civil Service*)

ILLUSTRATED

CONSTABLE & CO. LTD.
LONDON . BOMBAY . SYDNEY

1923

PRINTED IN GREAT BRITAIN BY
BILLING AND SONS, LTD., GUILDFORD AND ESSEX

PREFACE

THANKS are due to Dr. F. W. Foxworthy, Forest Research Officer, Messrs. A. M. Pountney, C.B.E., Financial Adviser to the Straits Settlements and Federated Malay States, H. C. Robinson, Director of the Federated Malay States Museums, B. J. Eaton, O.B.E., acting Director of Agriculture, J. B. Scrivenor, Government Geologist, M. Daly and G. A. Hereford, officers of the Malayan Civil Service, for the chapters appearing under their names in the table of contents. I am indebted to Mr. I. N. Evans of the Museums Department for a note on prehistoric celts and cave remains; to Mr. J. E. Nathan, Superintendent of Census, for particulars of the population in 1921; to Mr. Hayes Marriott, General Adviser, Johore, for revising the section on Johore; to Mr. J. L. Humphreys, Adviser, Trengganu, for a description of that State; and to the Public Works and Railway Departments for information as to roads and railways. The chapter on Sea-Fisheries has been compiled from Mr. C. N. Maxwell's paper on "Malayan Fishes," and approved by him.

Their Highnesses the Sultans of Johore and Perak and the Yang di-Pertuan Besar of Negri Sembilan have kindly allowed me to reproduce their portraits. Mr. W. G. Maxwell, C.M.G., Chief Secretary for the Federated Malay States, has given me the photograph of his father. For other illustrations I have to thank many friends, notably Dr. Foxworthy and Messrs. B. J. Eaton, J. D. Hall, T. Hubback, L. A. S. Jermyn, F. de la Mare Norris, H. C. Robinson, and J. B. Scrivenor, as well as the Asiatic Society of Bengal and the Japanese firms of M. S. Nakajima and

Company, Kuala Lumpur, S. Kurita, Seremban, and C. Ishii, Malacca. Mr. R. J. Wilkinson, C.M.G., has permitted me to use a photograph of his fine *chutam* ware, and to include, in another illustration, specimens from his collection of Malay gold and silver work along with some of my own pieces. The authorities of South Kensington Museum have supplied me with these two photographs and with another of some typical Malay weapons from my collection. The Survey Department has prepared the maps and charts. Several of the statistical charts are the work of Major G. Field.

All those chapters not ascribed to others have been written by myself; Mr. C. O. Blagden, Reader in Malay in the University of London, has added to my many obligations to him by reading them and giving me the benefit of his deep and critical knowledge of things Malayan.

R. O. W.

SINGAPORE, 1922

CONTENTS

CHAPTER	PAGE
I. THE MALAY PENINSULA: <i>Its Area, Boundaries and Divisions.</i> <i>Physical Features and Scenery</i> - J. B. Scrivenor	1
II. CLIMATE - - - - - J. B. Scrivenor	21
III. GEOLOGY - - - - - J. B. Scrivenor	26
IV. MINERALS - - - - - J. B. Scrivenor	31
V. FLORA AND FORESTS - - - F. W. Foxworthy	35
VI. FAUNA: (1) <i>Vertebrates</i> - - - H. C. Robinson	47
(2) <i>Invertebrates</i> - - - - - Anon	70
VII. POPULATION - - - - -	73
VIII. THE ABORIGINAL AND MALAY RACES - - -	80
IX. LANGUAGE - - - - -	93
X. MALAY LITERATURE - - - - -	97
XI. MALAY BELIEFS AND RELIGION - - -	101
XII. MALAY ARTS AND CRAFTS - - -	108
XIII. CHINESE—INDIANS—EURASIANS—OTHERS - - -	116
XIV. THE HISTORY OF THE MALAY PENINSULA:	
(1) <i>The Coming of the Sumatran Malays</i> - - -	126
(2) <i>Malacca and Muhammadanism</i> - - -	129
(3) <i>The Coming of the Portuguese</i> - - -	132
(4) <i>The Dutch Ascendancy</i> - - -	136
(5) <i>British Ascendancy in the Straits Settlements</i> - - -	140
(6) <i>British Relations with the Malay States</i> - - -	146
XV. ARCHAEOLOGY AND ANTIQUITIES - - -	153
XVI. ADMINISTRATION - - - - -	168
XVII. REVENUE AND EXPENDITURE - A. M. Pountney, C.B.E.	175
XVIII. COMMERCE AND TRADE - G. A. Hereford and M. Daly	177
XIX. MINING - - - - - J. B. Scrivenor	184
XX. AGRICULTURE - - - - - B. J. Eaton, O.B.E.	195
XXI. INDUSTRIES - - - - - B. J. Eaton, O.B.E.	207
XXII. SEA-FISHERIES - - - - -	213
XXIII. COMMUNICATIONS - - - - -	220

CHAPTER.	PAGE
XXIV. THE STRAITS SETTLEMENTS - - - -	224
XXV. THE FEDERATED MALAY STATES - - - -	233
XXVI. THE UNFEDERATED MALAY STATES - - - -	249
XXVII. MALAYA'S CELEBRITIES - - - -	261
APPENDIX - - - -	273
BIBLIOGRAPHY - - - -	277
INDEX - - - -	281

LIST OF ILLUSTRATIONS

	PAGE
1. MOUNTAIN RANGES IN THE MALAY PENINSULA AND ARCHIPELAGO	3
2. MOUNTAINS AND RIVERS OF THE SOUTHERN PART OF THE MALAY PENINSULA	5
3. BUKIT CHUPING, PERLIS	8
4. RAPIDS ON THE TAIHAN	10
5. KELANTAN RIVER	11
6. CAMPHOR WOOD (KAPOR)	15
7. BATU CAVES	17
8. SHALE AND SANDSTONE	28
9. MANGROVE WITH SEEDLINGS	39
10. SONNERATIA ALBA, SHOWING AIR-ROOTS	40
11. TAPPING GUTTA-PERCHA	44
12. ELEPHANT ON YOUNG RUBBER ESTATE	51
13. TWO-HORNED RHINOCEROS	52
14. A SELADANG	53
15. MALAY WOMEN AND CHILDREN	76
16. MALAY CHILDREN ON RUBBER ESTATE, JOHORE	77
17. A CHINESE BARBER'S SHOP	78
18. A NEGRITO	81
19. SAKAI, ULU KAMPAR, PERAK	82
20. SAKAI VILLAGE, SUNGKAI, PERAK	83
21. JAKUN, TEMBELING RIVER, PAHANG	84
22. A MALAY BOY	88
23. A MALAY GIRL	89
24. MALAY BULLOCK-CART DRIVERS RESTING	90
25. A MALAY HOUSE	91
26. A MALAY PLOUGHING, MALACCA	95
27. A TRIBAL FEAST, NEGRI SEMBILAN	103
28. A MALAY BRIDE	104
29. OLD MALAY WOMAN	106
30. MALAY GOLD AND SILVER WARE	110

	PAGE
31. CHUTAM WARE - - - - -	112
32. MALAY WEAPONS - - - - -	113
33. A MALAY HOUSE, SEREMBAN - - - - -	114
34. MALAY EMBROIDERY ON BRIDAL DAIS - - - - -	115
35. HALF-MALAY HALF-CHINESE GIRL - - - - -	117
36. WANGKANG OR MODEL SHIP BURNT WITH OFFERINGS TO SPIRITS BY CHINESE BABAS OF MALACCA ONCE EVERY FOURTEEN YEARS	118
37. CHINESE HOUSES BESIDE A RIVER - - - - -	120
38. CLAY TABLETS FROM A KEDAH CAVE - - - - -	128
39. MALACCA RIVER - - - - -	130
40. MALACCA TOWN - - - - -	136
41. GATE OF MALACCA FORT, DATED A.D. 1670 - - - - -	138
42. THE LAKE, TAIPING - - - - -	147
43. STONE CELTS - - - - -	153
44. BRONZE AXE-HEAD - - - - -	154
45. BRONZE BELL-LIKE ARTICLE - - - - -	155
46. IRON IMPLEMENTS - - - - -	156
47. THE BATANG PADANG BUDDHA - - - - -	159
48. THE MAKARA, MALACCA - - - - -	160
49. PENGKALAN KEMPAS ORDEAL STONE, SOUTH SIDE - - - - -	161
50. THE "RUDDER," PENGKALAN KEMPAS - - - - -	162
51. THE "SWORD," PENGKALAN KEMPAS - - - - -	163
52. LANTERN TOMBS, PEKAN, PAHANG - - - - -	164
53. PORTUGUESE CHURCH OF ST. PETER - - - - -	166
54. THE PERAK RIVER, KUALA KANGSAR - - - - -	171
55. THE FEDERAL OFFICES, KUALA LUMPUR - - - - -	173
56. SINGAPORE RIVER - - - - -	178
57. A TIN MINE, GOPENG, KINTA - - - - -	189
58. A CHINESE BOX-PUMP, KAMPAR - - - - -	190
59. A TIN MINE, KINTA - - - - -	191
60. A KING COCONUT - - - - -	196
61. BURNING A FOREST CLEARING - - - - -	197
62. A RUBBER PLANTATION - - - - -	198
63. AFRICAN OIL PALM - - - - -	199
64. MANILA HEMP - - - - -	200
65. NIPAH PALMS - - - - -	202
66. SAGO PALMS - - - - -	204
67. MALAYAN FRUITS - - - - -	205
68. A PLANTER'S BUNGALOW - - - - -	208

LIST OF ILLUSTRATIONS

xi

	PAGE
69. POTTERY WORKS, GOPENG - - - - -	211
70. CHINESE FISHING VILLAGE - - - - -	216
71. MALAY FISHERMEN, MALACCA - - - - -	218
72. RAFFLES SQUARE, SINGAPORE - - - - -	225
73. THE KING'S DOCK, TANJONG PAGAR - - - - -	226
74. PENANG - - - - -	228
75. AYER HITAM TEMPLE, PENANG - - - - -	229
76. MALACCA BY MOONLIGHT - - - - -	231
77. H.H. SIR ISKANDAR SHAH, K.C.M.G., SULTAN OF PERAK - - - - -	234
78. THE ROYAL MOSQUE, KUALA KANGSAR - - - - -	235
79. THE MALAY COLLEGE, KUALA KANGSAR - - - - -	236
80. THE MOSQUE, KUALA LUMPUR - - - - -	239
81. KUALA LINGGI - - - - -	241
82. H.H. SIR MUHAMMAD, K.C.M.G., YANG DI-PERTUAN BESAR, NEGRI • SEMBILAN - - - - -	242
83. A NEGRI SEMBILAN RIVER - - - - -	244
84. A ROYAL GRAVE, PEKAN, PAHANG - - - - -	247
85. H.H. SIR IBRAHIM, G.C.M.G., K.B.E., SULTAN OF JOHORE - - - - -	250
86. GUNONG JERNEH, PERLIS - - - - -	255
87. MALAY MARKET, KELANTAN - - - - -	256
88. A KELANTAN LOOM - - - - -	258
89. SIR STAMFORD RAFFLES - - - - -	264
90. JOHN CRAWFURD - - - - -	267
91. SIR WILLIAM MAXWELL, K.C.M.G. - - - - -	270

MAP

GENERAL MAP OF THE MALAY PENINSULA - - -	<i>At end of volume</i>
--	-------------------------

MALAYA

CHAPTER I

ITS AREA, BOUNDARIES AND DIVISIONS, PHYSICAL FEATURES AND SCENERY

AREA, BOUNDARIES AND DIVISIONS.—On the continent of Europe the Malay Peninsula is still called Malacca, after the old-world settlement that, having played a great part in the history of European adventure in the East, is now best known in England as adorning the name of “a clouded cane.” In this book it will be called Malaya, though strictly that term includes also Labuan, the protected Malay State Brunei, the Cocos or Keeling Islands, Christmas Island, the territory of the British North Borneo Company, and Sarawak, the independent Bornean land under the rule of Raja Brooke. The word “Malaya” is an English hybrid applied only to British possessions and protectorates, and especially perhaps to the Peninsula, so that British Malaya is pleonastic. The origin of the word “Malay” is uncertain. It has been fancifully derived from a word meaning to “run” and supposed to refer to some early migration of the race. It has been surmised “that it was carried by the first emigrants from the Malaya country in Southern India.” Almost certainly it springs from a place-name in Sumatra, the *Malayu* country annexed by the Maharaja of Buddhist Palembang (the greatest and oldest of Malay kingdoms) in the time of I-Tsing, a Chinese Buddhist pilgrim. The kingdom of Malayu is mentioned first in Chinese records a few decades before I-Tsing visited Palembang in A.D. 671, and geographical details point to it having been situated in the basin of the Batang Hari, the main river of the Jambi district. When Javanese troops attacked it at the end of the thirteenth century of our era, the Malay country extended up to Minangkabau. And the “Malay Annals,” written about A.D. 1612, preserve a tradition that there was a river Malayu in the Minangkabau region, above which was a mountain, Si-Guntang Mahameru

or the modern Merapi, a volcano, and that its basin was the cradle of Malay royalty.

The term "Malay Peninsula" covers that portion of Asia which forms a prolongation of the narrow neck of land, known as the Isthmus of Kra, where Burmese territory abuts on Lower Siam. The southern end of the Peninsula is defined by the estranging sea, but the northern limit has been given by one author as 10° north latitude, by another as 13° north latitude, while a third has apparently regarded the low country stretching from Kedah to Singgora as the dividing line between the Peninsula and the Isthmus. Geographically, 10° north latitude is the best northern limit for the Peninsula, but this book will be devoted to the territory south of $6^{\circ} 50'$ north latitude. Except for a small piece of Siamese territory on the east coast, this area is under British rule or influence, and covers with adjacent islands approximately 52,500 square miles. It is bounded on the west by the Straits of Malacca, on the east by the South China Sea, and on the south by the shallow waters in which are set the green islands of the Riau-Lingga Archipelago.

Politically that part of the Malay Peninsula under British rule or protection is divided into:

1. The Crown Colony of the Straits Settlements, comprising the island of Singapore, the island of Penang with Province Wellesley and the Dindings, and the Settlement of Malacca.

2. The Federated Malay States: Perak, Selangor, Negri Sembilan and Pahang.

3. The Unfederated Malay States: Johore, Kedah, Perlis, Kelantan and Trengganu.

The area of these divisions is made up as follows:

STRAITS SETTLEMENTS:						Square Miles.
<i>Singapore</i>	..	..	..	..	..	217
<i>Penang</i>	..	..	..	..	..	108
<i>Province Wellesley</i>	..	..	..	..	..	280
<i>The Dindings</i>	..	..	..	..	..	183
<i>Malacca</i>	..	..	..	..	..	720
Total						1,508
FEDERATED MALAY STATES:						
<i>Perak</i>	..	..	..	..	..	7,800
<i>Selangor</i>	..	..	..	..	..	3,156
<i>Negri Sembilan</i>	..	..	..	..	..	2,550
<i>Pahang</i>	..	..	..	..	..	14,000
Total						27,506

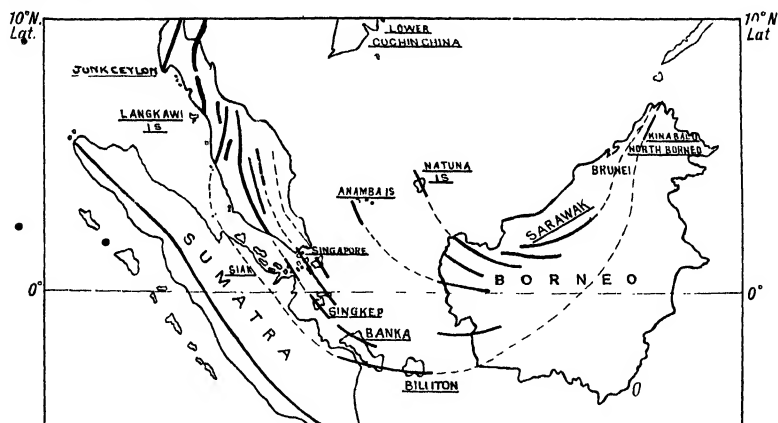
UNFEDERATED MALAY STATES:

Square Miles.

<i>Johore</i>	..	..	..	..	..	7,500
<i>Kedah</i>	..	..	..	..	..	3,800
<i>Perlis</i>	..	..	..	..	..	316
<i>Kelantan</i>	..	..	..	..	..	5,870
<i>Trengganu</i>	..	..	..	..	..	6,000

Total 23,486

MOUNTAINS AND HILLS.—The Malay Peninsula may be described briefly as an area of low-lying land trending north-north-west and south-south-east, with a skeleton of mountain ranges lying more or less obliquely to the axis and succeeding one another *en échelon*. Distinct from the mountain ranges there are also isolated hills and groups of hills.



The dark lines in the diagram show these ranges on a small scale and their probable connection with geographical and geological features in the Malay Archipelago. At the extreme north, which is approximately 10° north latitude, is shown the southern end of the range that forms the backbone of the Isthmus of Kra and terminates in the island of Junk Ceylon. To the east of this is a range that extends northwards to form islands in the Gulf of Siam. On the mainland it passes through the Siamese province of Nakawn Sitamarat and then continues as the boundary between Nakawn Sitamarat, Palean and Setul on the west, and Pataloong, Singgora and Perlis on the east. At its southern end this range turns slightly towards the west, and it may be that the Langkawi Islands mark a prolongation of its axis.

No detailed surveys are available of the country north of Perlis, but in lower latitudes information is more accurate and abundant, though surveys are still far from complete.

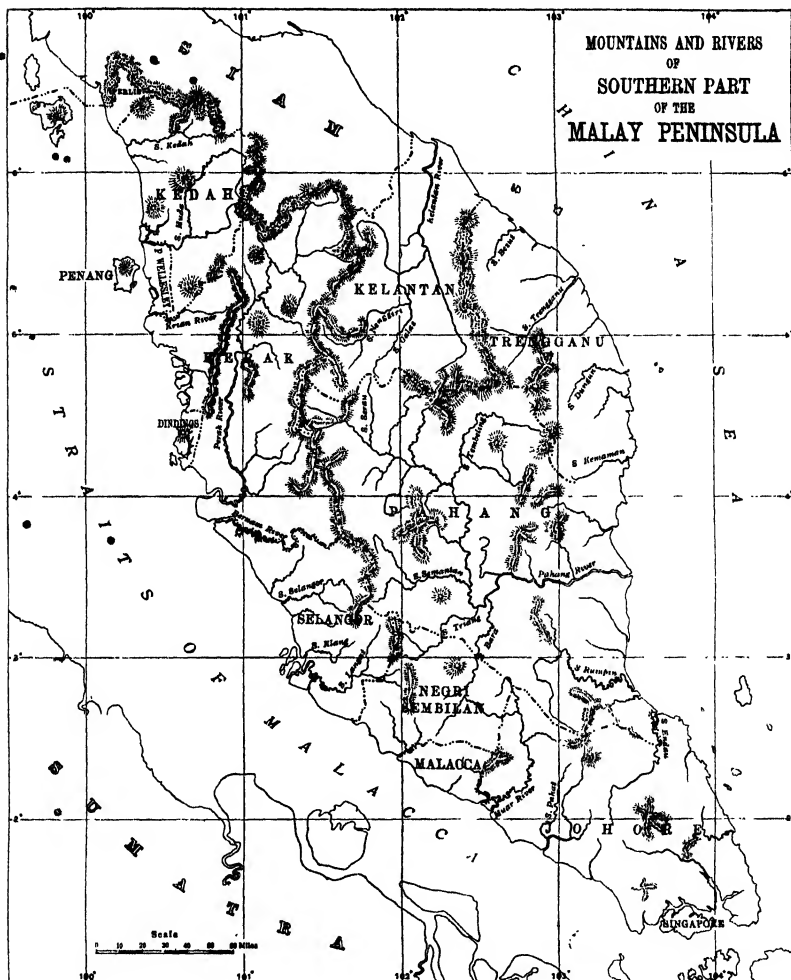
The small state of Perlis consists largely of a flat plain, which is continuous with similar land in Kedah. East of the railway the watershed between Perlis and Kedah on the one hand, and Siamese territory on the other, is low, being not much above 300 feet, until one reaches a range of hills, some more than 2,000 feet high, stretching from the neighbourhood of Alor Star towards Singgora. A cart road to Singgora runs on the west side of this range and on the east side of an isolated ridge, Bukit Talipong.

Kedah, in the north, is largely flat agricultural land. From this land and from its continuation in Perlis small isolated hills rise, the most striking formed of limestone. About the centre of the State, are two prominent mountains—Gunong Perak (2,823 feet), believed to be granite, and Kedah Peak (3,978 feet), of quartzite with granitic intrusions. The southern part of Kedah is low rolling country. The eastern part is all hilly, but the highest peaks are found on the boundary that abuts on the Patani valley. The constitution of these mountains and of other peaks beyond, in Siamese territory, is not yet thoroughly known, but southwards they are continued by a line of low hills, which rise suddenly to 6,103 feet in a granite mass known as Gunong Bintang, due east of Penang. The granite continues southwards from Bintang, forming the peaks Inas (5,898 feet), Hijau (4,751 feet) and Bubu (5,434 feet). It ends near Bruas; but the granite of the Dindings and the Pulau Sembilan are obviously outcrops of the same mass. This range has no recognised name, but may be conveniently called the Bintang range.

East of the Bintang range a lower line of heights, the Kledang range, lies between the Perak and Kinta rivers. It is of granite, and is extended beyond the gap through which the Plus flows, by the granite of Gunong Ulu Soh (4,336 feet). North of Gunong Ulu Soh is a quartzite peak, Kendrong (4,010 feet), with a smaller peak Krunai joined to it by a saddle; Kendrong and Krunai rise abruptly and steeply from ground about 600 feet above sea level, and stand as sentinels over a large part of Upper Perak. To the north-north-east of Gunong Ulu Soh is the rugged country of Upper Perak, extending into the little-known headwaters of the Perak river.

East of the Kledang range is the greatest line of granite peaks in the Peninsula, generally known as the main range, the highest being

- Korbu, a Sakai word for "mountain" corrupted by Malays to Kerbau (= "buffalo"; 7,160 feet). Northwards from Korbu there are more high peaks, believed to be of granite, though like Korbu they may have a cap of sedimentary rocks. Very little is known of



the structure of the range between Korbu and Noring (6,100 feet), 54 miles to the north-north-east, but north of Noring the range is not much over 2,000 feet, and instead of granite hills consists of altered sedimentary rocks with small granite and diorite intrusions. There is evidence, however, that about 18 miles south-south-west

of Noring, which is of unknown composition, a chain of granite peaks breaks away to the north, cut through by two large tributaries of the Perak, the Sengoh and Tiang, and by the Perak itself. These granite hills continue into Siamese territory between the Patani and Telubin rivers. It appears then that the granite axis of the main range here leaves the watershed, which is continued by the altered rocks to the east.

Korbu is approximately on the centre of a decided curve in the main range. To the north it trends north-north-east, to the south it trends south-south-east, forming the familiar peaks bordering the rich tin-mining district of Kinta, the districts of Batang Padang, Ulu Selangor, Kuala Lumpor, Ulu Langat, and finally dying away in the hilly country of Negri Sembilan and Malacca.

In the Batang Padang and Ulu Selangor districts quartzite hills form a belt of rugged country west of the main range.

On the east of the main range in Pahang is a comparatively low range of quartzite foothills, best seen in the neighbourhood of Bentong, where from Gunong Raka (1,915 feet) one can look north and south along this range. It is believed to extend into Kelantan, and is known to exist in the headwaters of the Pahang basin, where the Telum cuts its way through it in a gorge of hard conglomerate.

East of these foot-hills is a broad plain broken by a few low hills and then on the east of the plain towers the tremendous isolated mass of Benum (6,916 feet), formed of hornblende granite and related rocks. This range is continued southward by a succession of ridges separated by tributaries of the Pahang river and by the Muar. These ridges point towards Mount Ophir (4,187 feet) in Johore, and approach closely the southern end of the main range. To the north Benum is not continued by any high ridges, but on the Jelai and Tanum there are exposures of granitic rocks, which may mark a continuation of this igneous intrusion. In the extreme north-west of Kelantan, where that State abuts on Perak and Siamese territory, there are rocks akin to those found in the Benum range, and it is thought possible that they are a further prolongation of the same igneous mass. The intervening country has yet to be geologically surveyed.

To the east of the Benum axis is a broad outcrop of quartzite, conglomerate and shales, which culminates on the northern border of Pahang in the two mountains—Tahan (7,184 feet), the highest in the Peninsula, and Larong (6,350 feet). The scenery in the neigh-

bourhood of these heights, where the country is about 5,000 feet above sea level, differs greatly from mountain scenery elsewhere in the Peninsula. On the high granite hills vegetation is dense, even to the highest points, and it is only on wind-swept ridges that a traveller can obtain a view over it. But on the Tahan and Larong highlands the lack of nutriment in the little soil there is and the strong winds of the north-east monsoon have combined to keep the vegetation so low that the country is open for miles, and in many places shows bare rock. Cliffs of quartzite, too, are not uncommon; they are particularly conspicuous in a gorge cut by the river Teku, a tributary of the Tahan.

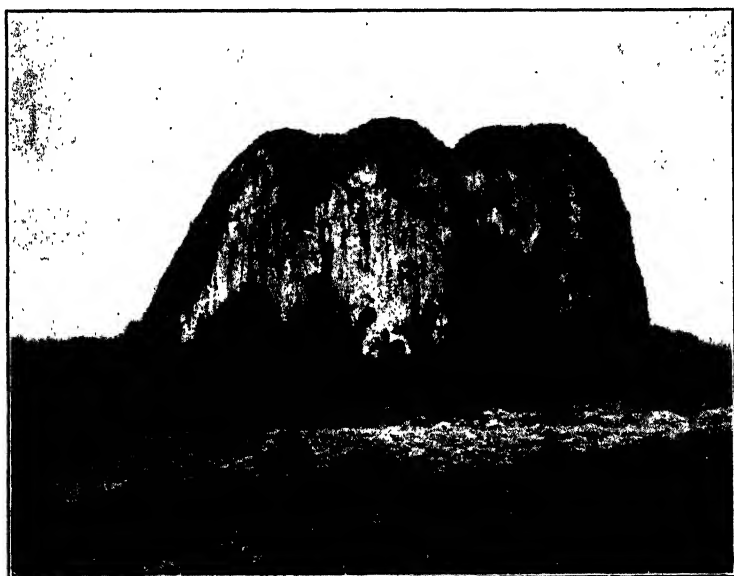
This hard quartzite mountainous country extends into Kelantan northwards. To the south it is continued as rugged but lower hill-land past the Tekai, a tributary of the Tembeling, and reaches the Pahang river a little to the east of the sharp bend where it turns eastward. South of the Pahang river are more quartzite hills, of which little is known yet, and in Johore there are other hills that may form a continuation of this part of the skeleton of the Peninsula. This view is supported by the fact that quartzite and conglomerate, older than the granite of that island, occur in Singapore, which lies on the same line as the quartzite hills in Pahang just mentioned.

To the east of this broad quartzite outcrop again there is evidence of a succession of tin-bearing granite intrusions. They are found in Trengganu, Kuantan, Pontian, Endau, Mersing and the south-east of Johore. It may be that these occurrences mark the extreme summits of another great mass of granite, such as the main range, that has been touched by denudation only at its highest points. They appear to mark a deep-seated skeletal element that extends into Dutch territory, and is, with the Tahan quartzite-band, the reason of the extension of the Peninsula east of the Benum range.

Off the east coast are numerous islands. Some of these are granite, some rhyolite. They have not yet been thoroughly examined geologically. The largest, Tioman, is of granite on the west and altered sediments on the east.

LIMESTONE HILLS.—In addition to isolated mountains such as Kedah Peak, and isolated granite hills such as those at Kuala Selangor and Jugra (Kuala Langat, Selangor), a characteristic feature of the country is the limestone hills, which are best developed in Perlis and the Kinta district of Perak. Most of these hills, though

far inland, are flanked by precipitous cliffs and rise from low ground. "When one is close, the first general impression is that of an expanse of chill grey limestone, so sheer or overhanging that not even a fern can find roothold on its bare sides, and of a line of forest trees growing upon the summit in bold outline against the sky, and completely cut off by the precipice from the forest of the plains. A second glance, however, generally shows that the precipice is broken in places where the stone appears to have crumbled away, and here the trees of the hilltop come down to meet the trees of the plain. The hills vary in size, some being little more than



BUKIT CHUPING, PERLIS.

gigantic isolated boulders, whilst others are 2,000 feet high and many miles in circumference." In the Langkawi Islands, such cliffs can be seen rising straight from the sea. Among the finest examples inland are Jerneh and Chuping in Perlis, Geriang (699 feet) in Kedah, Pondok (1,860 feet) and Nasi Si-Hebat (2,005 feet) in Perak, Senyum (1,595 feet) and Chintamani in Pahang.

Good views of the limestone hills in Perlis, Kedah and Perak are obtained from the railway.

RIVERS.—The heavy rainfall of the Peninsula is drained by a network of rivers, which rush steeply down the mountain-ranges,

bringing with them much detritus, and then flow on at a less precipitous angle over the low land to the Straits of Malacca or the China Sea. Rivers that flow into the Straits of Malacca are generally very muddy near their mouths, fringed with mangrove swamps and infested by crocodiles. Most of the coast also is muddy, though sandy beaches occur, as, for instance, at Port Dickson and in the Dindings. The coast of the China Sea is more open, more sandy, and to a large extent fringed by graceful casuarina trees, under which one can walk from one river-mouth to another with an occasional detour round a rocky headland.

Of the many rivers that drain the Peninsula, the chief are the Perak, the Pahang and the Kelantan.

The Perak river, approximately 170 miles in length, rises in the main range where Perak, Kelantan and Lower Siam meet. It is uninhabited down to the first of the scattered villages known collectively as Belum. In its wild and little-known upper reaches it rushes over difficult rapids and through two beautiful gorges of mica-schists, one named by Malays "the Rhinoceros' Mattress." At Belum it flows swiftly over a granite bed and then sets out on a long journey through magnificent jungle scenery, wild and fascinating, over dangerous rapids, with but few inhabitants on its banks, until one comes to the mouth of the Plus, above Kuala Kangsar. Here the Perak becomes more sedate: villages abound on both banks, and near Telok Anson the river enters a long tidal stretch of mud-flats and mangrove swamp, now largely replaced by rubber and coconuts. Its mouth near Bagan Dato' is dull and uninspiring, making it hard to realise that this is the same glorious river on which above the mouth of the Rui a bamboo-raft can be navigated downstream over clear water and swirling rapids.

The Perak river is peculiar in having few large tributaries. In Upper Perak there are, on the left bank, two tributaries of which little is known, the Tiang and the Sengoh. The latter is a big stream, flowing through very hilly country. The Temengor is a large river south of the Sengoh, also on the left bank, with the Piah and Plus farther south on the same side. The Kinta and the Bidor are nearer the mouth. On the right bank there are no large tributaries.

The Pahang, with its tributaries, is the largest river in the Peninsula. The main stream is known as the Pahang only from its mouth to the debouchement of the Tembeling. Above this it is called the Jelai, and higher still the Telum. The length from the

extreme headwaters of the Telum to Kuala Pahang is about 200 miles.

The Telum, a turbulent river full of granite rapids, has numerous small tributaries. After passing through the conglomerate gorge mentioned above, it becomes the Jelai and is joined by the Jelai Kechil, Serau, Tui, Telang and Tanum. At Kuala Lipis, a larger river, the Lipis joins it. Lower down, the Kechau and Chika are other tributaries, and at Kuala Tembeling the river becomes the Pahang.

The Tembeling is the finest and least known of the larger tributaries of the Pahang, although Malay villages extend to within a



RAPIDS ON THE TAHAN.

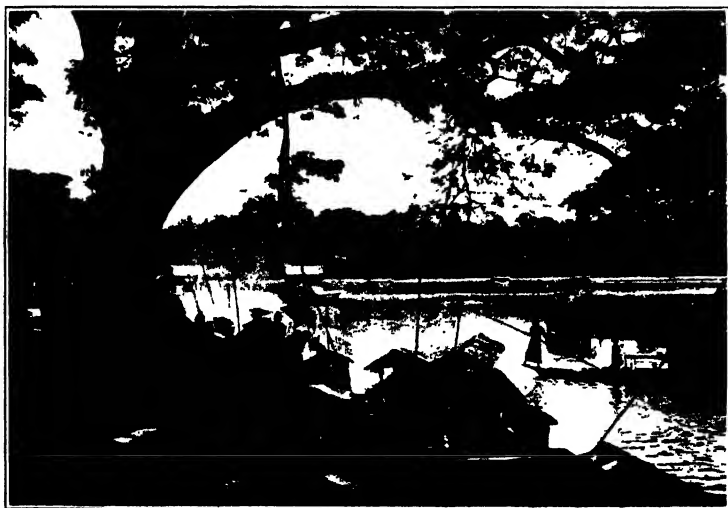
few days' walk of the extreme headwaters, and there is a well-known route from Ulu Tembeling to Ulu Dungun in Trengganu. Above the mouth of the Tahan river, a wild rocky stream leading to the base of the mountain of the same name, there are rapids that make navigation difficult even in the smallest boats. These occur in the belt of quartzite and in old volcanic rocks beyond it. Above the latter the river is quieter, and its banks well populated. An important tributary of the Tembeling is the Tekai, which also flows through the quartzite belt.

Below Kuala Tembeling the river, now known as the Pahang, broadens. At Temerloh it is joined by the Semantan, a large tributary on the right bank.

• Farther south still the Pahang makes a sharp bend to the east-north-east, and is joined by the Triang and Bra. The Triang rises in Negri Sembilan; a tributary of the Bra rises in the same State.

The Pahang river now becomes still broader, shallow and sandy, studded with many islets. It turns eastward through the quartzite belt, and emerges on an extensive alluvial flat, over which it flows to the China Sea.

The basin of the Pahang river shows very well a feature characteristic of the whole country—namely, the low altitude of the rivers far inland as compared with adjacent mountains. Thus Bentong,



Nakajima.

KELANTAN RIVER.

on a river of the same name to the east of the main range, is only 321 feet above sea level; while the watershed between the Serting and the Muar, which rises in Negri Sembilan and flows into Johore, is only 180 feet above sea level. Again, the watershed in the headwaters of the Tanum, west of and close to Gunong Tahan (7,186 feet), is only 628 feet above the sea.

The Kelantan river is the next most important river of the Peninsula. Under various names it is navigable for good-sized boats almost up to the southern boundary, and can be traversed by motor launches as high as Kuala Pergau. The river is known as the Sungai Kelantan from its mouth to Kuala Lebir, where it is

now commonly spoken of as the Sungai Galas up to Kuala Sungai; more properly it should be called Sungai only. Above Kuala Sungai it is known as the Sungai Nenggiri to Kuala Betis, and thence as the Sungai Betis.

It runs through hilly country from its source to Kuala Sungai with a narrow belt of cultivable land on either bank; below this the cultivable area except for stretches of rapids between hills begins to widen, until below Kuala Lebir most of the area on the east is cultivable up to the hills that divide Trengganu from Kelantan, and on the west for about one mile up to Kuala Kesiah and below that up to the Siamese border.

The headwaters of the Galas are separated by a very low watershed from the headwaters of the Serau in the Pahang drainage.

One Malayan river is much like another. It would be tedious to give in detail a description of more of them. They share in common the following features. In the hills they plunge swiftly downwards in cascades of sparkling water (where mining is not in progress) and over high falls of granite or quartzite. On the lower land they flow sometimes through beautiful avenues of jungle trees, which meet overhead and cast a welcome shade over the whole channel during the noontide heat. Sometimes their course is interrupted by rapids, long and tortuous as the granite rapids of the Perak, short, steep and savage as the quartzite and schist rapids of the Perak, the Tembeling and the Tekai. Sometimes they flow through rocky gorges, as the Perak in its headwaters, the Telum, the Bentong, the Teku and Tahan in Pahang. In their lower reaches the rivers that flow into the China Sea are finer than those on the west coast, but even mangrove swamps are not without charm or interest. To the Malays the rivers are the chief natural features, for they were their highways until the advent of roads and railways. To the traveller they afford the most beautiful scenery.

As ports the rivers on the east coast are of little value. They are blocked by bars of sand that prevent the entrance of any but very shallow draught steamers. Kuantan is the best of these ports. On the west coast conditions for shipping are better, but not satisfactory. Ships of medium draught can go up the Perak river to Telok Anson, but the entrance is shallow and difficult to follow. Port Swettenham is the only good port, protected by islands at the mouths of the Klang and Langat rivers and able to accommodate ocean-going steamers.

LAGOONS AND LAKES.—On the east coast lagoons are formed

owing to the ponding back of river-water by sand thrown up by the China Sea.

Lakes are few and insignificant. South of the Pahang river and near its great bend to the east is Lake Chini, not far from Gunong Chini. This is a small, irregularly shaped sheet of water with an outlet into the Pahang river.

- In Upper Perak a large and muddy pool known as Tasek by the Malays is believed to empty itself by a subterranean outlet in limestone into Kedah territory.

In the Langkawi Islands on Pulau Dayang Bunting there is a small and very beautiful little lake encircled by limestone cliffs.

ISLANDS.—Both on the west and on the east islands are numerous. On the west the Langkawis, with Terutau and the Butang Isles, form the biggest group, larger also than any group on the east. In area Pulau Langkawi is larger than Penang and second only to Singapore, these two being the most important islands politically. Between the Langkawis and Penang is a number of small islands.

South of Penang the next large island is Pangkor, off the Dindings. The beautiful little Sembilan Islands lie to the south of it.

• Pulau Angsa is a well-known resort off the coast of Selangor; and off Port Swettenham is a group of alluvial islands of which the best known is Carey Island.

On the east coast of Johore there is a large and scattered group of islands, the biggest being Tioman, at the southern end of which are pinnacles of granite called by Malays the "Dragon's Spines." They believe that this beautiful island, like many others, is a petrified dragon.

Pulau Berhala is a very small island between Pekan and Tioman.

There are other islands off Trengganu and Kelantan, the chief being Great Redang.

"CAMERON'S PLATEAU."—In that portion of the main range of the Peninsula that lies behind Gopeng and Tapah is an indefinite tract of country, sometimes referred to as Cameron's Plateau. It was discovered about 1885 by a Government explorer named Cameron, who did not describe it as a plateau, but as *pamah*, a Malay word meaning flat valley-land even in hilly country. Such land certainly exists in the aforesaid part of the main range in the headwaters of the river Telum and its tributaries.

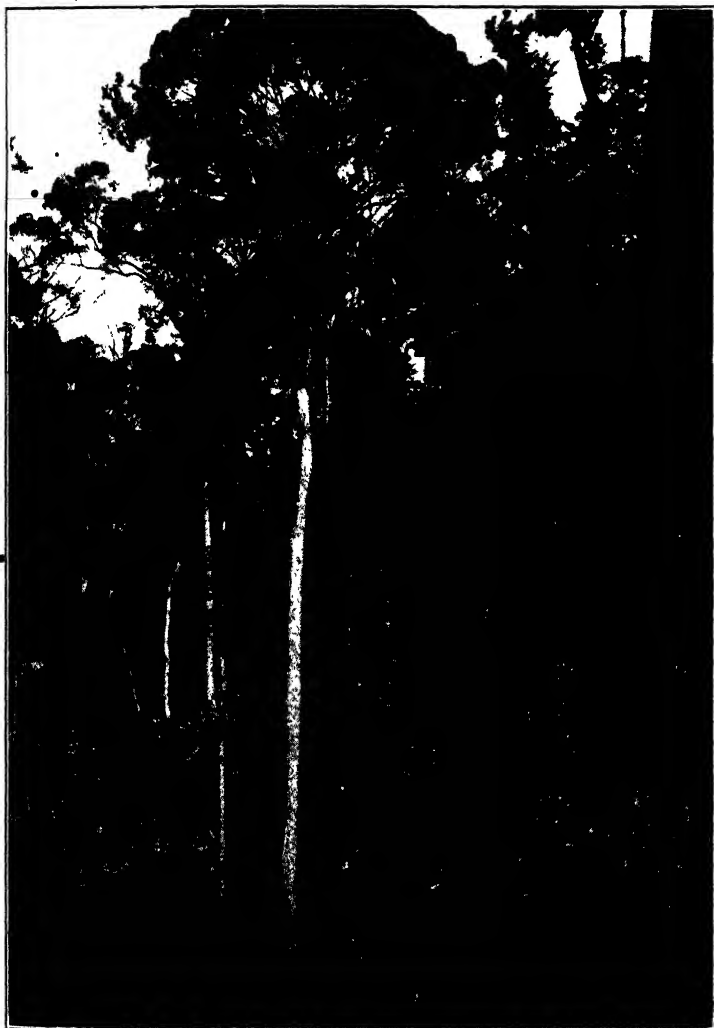
SCENERY.—The Malay, dwelling on the bank of a river, his only

highway from village to village, and clearing no more of the dense jungle than was necessary to provide rice-fields and orchards for his needs, had no thought for panoramic views over the fair land in which he lived. If he climbed forest-clad hills, it was in search of jungle produce; the idea of felling trees to get a vista of his country never occurred to his utilitarian mind, and the open highlands of the Tahan and Larong mountains were closed to him by stories of genies and dragons ready to destroy trespassers near their domain. The Malay fisherman on the coast saw more. Beyond the mangrove belt or the casuarina-lined sands, he could descry distant hills, now in a purple shimmering haze capped with white billowing cumuli, now dark under a pall of thunder-clouds. But from fisherman and rice-grower alike the glories of this small tropical country were hidden, and even now have been only partly unfolded to those who have had the fortune to climb the highest peaks, drift down the largest rivers and explore the islands off either coast.

In the last thirty years man has destroyed a small proportion of the forests of Malaya, but there is still sea beyond sea of greenery, so that it is not difficult to realise what the country was like before any of the giant trees of the jungle were felled. Climb to the top of Kendrong in Upper Perak, and in the view from the summit there will be very little to remind of the work of men's hands, though the field of vision extends from the distant peaks of the main range to the valley of the Piah and Gunong Bintang. Or make the easier ascent of Gunong Paku at Intan, and look towards Kendrong, standing with its smaller brother Krunai like sentinels over Grik: there will be nothing in the landscape but ridge after ridge covered with luxuriant trees, the limestone cliffs of Batu Puteh, and last, the two towering peaks.

Every European who has travelled in the cool green Malayan jungle, set with tree-trunks rising straight to 60 feet without a branch, must have felt the desire to break out of the tangle of encircling vegetation, to climb to a height and look down on the forest as on a prison from which he has escaped; and even if the attempt entails felling large trees on a hilltop to obtain a view, it is well worth the trouble. A rolling sea of treetops stretches for miles and miles on every side. Close at hand are a few clusters of white or orange rhododendrons, a few conifers of small stature and a bright yellow ground orchid. Down the slopes of the hill the silver-grey tops of *m̄ranti* trees stand out from the darker greens; here are the brilliant young green leaves of one jungle-tree, there

the red shoots of another. The sunlight falls on the delicate foliage and the smooth golden-yellow trunk of the tall beautiful trees where wild bees nest, the far-flung branches of the *jelutong*, the



CAMPHOR WOOD (*Kapor*).

broad fronds of the tree-fern and the rough red bark of the *rēngas*. In the distance these merge into a soft cloak of grey-green foliage, greyer as the landscape recedes until the blue of the

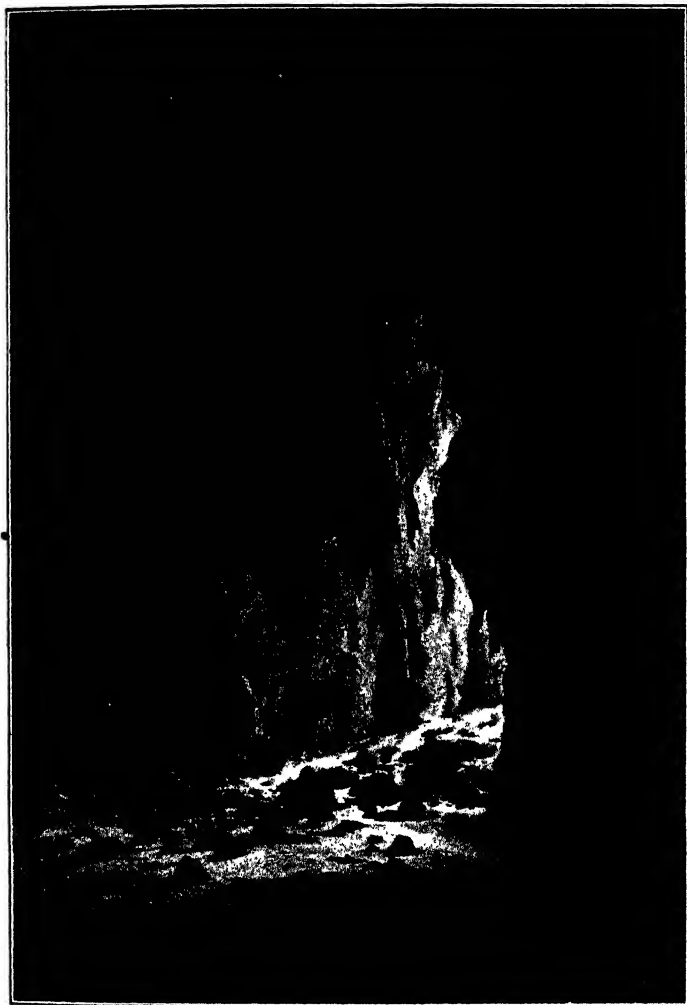
tropical haze envelops it and subdues its tints up to the limit of the horizon.

Or stand on Gunong Korbu and look towards the east before sunrise. The dawn breaks, revealing a vast expanse of jungle-covered mountains. Far in the distance a dark mass shows up dimly against the brightening sky. Tints of carmine and purple steal upwards; the outlines of the mountains, fringed with trees, become more clearly defined; cold white clouds map out the valleys; a flood of golden light heralds the rising sun, and eighty miles away Tahan, the highest of the Peninsula's mountains, stands revealed against the glow, as the dark grey gives place to warm purple, fades gradually to blue and finally disappears in the haze of a brilliant morning.

On a jungle-path the vegetation is so dense that the form of individual trees is lost, but on the rivers, away from habitations, the wall of forest on either side can be seen in all its detail. The sun, half-way to the zenith, picks out the edge of each mass of foliage in vivid green; at the end of a long reach of calm water deep blue shadows hide behind the trunks and leaves. Masses of orange-flowered creepers and bright purple blossoms (*bungar*) break the monotony, graceful bamboos droop over the stream; white-leaved bushes, the rose-madder fringes of the *bulu badak*, the pendent crimson strings of the *bunga upak* are reflected from the unruffled surface. The river becomes shallower and runs swiftly over a pebble bed; a sandbank at a bend is bright with many-hued butterflies. Now rocks appear, and the river breaks into foam as it rushes over a rapid. A distant mountain, purple and flecked with clouds, comes into view. A cliff of limestone, undercut by the river so deeply that multitudes of bats can shelter under the ledge, towers above one bank, while on the other feathery *nënëring* trees lift their heads above the general level of the forest.

In the cleared land of the Kinta valley some of the peaks of the main range are visible from the highways. The notched peak of Chabang looks down the Station Road at Ipoh. In December the storm-clouds of the north-east monsoon can be seen lapping over the range and dissolving in the sunlight of the Perak side. Korbu overshadows the small village of Tanjong Rambutan. Bujang Malaka towers in solitary state above Kampar. If one follows the railway south, there come into view first Gunong Liang, near Tanjong Malim, in the main range, then the hills of Ulu Selangor and the cliffs of the limestone hill at Batu near Kuala Lumpur.

But it is to the north of Kinta that the landscape is most interesting. After crossing the broad Perak river, the railway climbs the pass to Taiping, leaving behind it on one side Gunong Pondok rising



BATU CAVES.

precipitously from the plain, and on the other the beautiful valley of Bukit Gantang, green with rice-fields. Once at Taiping the track does not thread jungle again until very near the Perlis

boundary. It traverses the broad rice-lands of Krian, and enters Province Wellesley, a district to be compared for its cultivation only with Malacca. At Bukit Mertajam it skirts a lofty granite hill, planted almost to its summit, and then runs into Kedah. The train passes through rubber-land, as it gradually approaches the eastern end of Kedah Peak with its precipices of quartzite. Once past the Peak, it comes to what is perhaps the most beautiful open country in the Peninsula, the broad cultivated plain of North Kedah and Perlis. In North Kedah this plain is quite flat, but from it rise low isolated hills, the smallest mere knolls. Some, north of Alor Star, are of limestone with characteristic cliffs overlooking the rice-fields. Others show no rock, but are covered with wild trees or orchards. Elephant Hill beyond Alor Star rears its great bulk from the plain close to the sea, and it does not require much imagination to picture the plain of North Kedah and Perlis covered with sea water from which rose these hills, the islands it is believed they once were; hardly can one deride Malay legends that tell how some of them are stranded ships turned to stone.

The inland scenery of Malaya is rivalled by that of the coast and the islands off the coast. The contrast recalls the great variety this small country affords. On the east coast, instead of being enclosed by jungle, one can walk for miles on firm open sands, or, in the heat of the sun, under groves of casuarinas just above the limit of high tide. A rocky headland breaks the continuity of the wave-swept sand. Huge red and grey boulders of granite, piled one on another and capped by luxuriant vegetation that thrives on the salt spume thrown up by the China Sea, or perhaps twisted and jagged beds of quartzite may bar the way, unless a path can be found inland or the tide is low enough to allow of wading round. A river-mouth has to be crossed in a boat. A village of thatched houses built on piles is sending out its fleet of dug-outs and its more seaworthy but clumsy craft, broad in the beam with a sail of palm-leaf or of canvas many-hued as the coat of Joseph. One of these crafts will take the traveller across to the beautiful island Tioman, whose few inhabitants will provide a cockle-shell or a canoe, propelled by a double-bladed paddle, in which to explore the bays and headlands. These tiny boats ride easily on the swell, and one can look down into the depths on masses of red and purple corals and long-spined sea-urchins. As one rounds the rocky southern end of the island and passes between masses of granite, the swell may make one forget the beauty of the scene, but once landed on

a beach covered with the dead shells of the dreaded clam (*Tridacna*), the largest of bivalves, that can trap and drown the unwary diver, one forgets the discomfort.

In the Straits of Malacca, about halfway across to Sumatra, there is an islet, Pulau Jarak. Starting in the afternoon from Telok Anson and dropping leisurely down the Perak river fringed with rubber, coconuts and mangrove, one anchors for the night off the lighthouse on Pulau Katak. At dawn the launch puts out to sea, a turtle watching it solemnly with his head just projecting from the water. The island of Pangkor lies on the right, the Nine Islands on the left. Beyond these there is only the open sea; but after a while a small pyramid is descried on the horizon. The sea breeze strengthens and the erratic motion of the launch destroys pleasure in the approach, but at length the boat is launched and one is rowed slowly round the islet. Pulau Jarak, uninhabited, incapable of supporting man, is typical of many small islands off the coast of the Peninsula. There is one small sandy beach: for the rest the shore is rugged granite. The sea is crystal-clear; corals and fish are visible under the boat; at a rocky headland of Indian-red boulders the waves roll up in bands of purple and green, and break into dazzling foam. One lands by jumping on to a mass of granite, rough with small oysters, and goes inland to explore. From the outside the islet could not be more beautiful, but the chief features of the interior are steep slopes, cobwebs and sharp spines.

It is unnecessary to go to such inconvenience, however, to glimpse the beauty of Malayan islands. Most outward-bound liners touch at Penang, where the coconuts, sandy beaches and rocks of Tanjong Bunga and Batu Feringgi are equal to any coast scenery. Or, if the steamer fares direct to Singapore, there is that wonderful narrow portal to the harbour between the forts of Blakang Mati and the main island. Entering Singapore Harbour at sunrise, when the low cliffs are bathed in ruby light, is an experience never to be forgotten.

But for island scenery the Langkawis surpass anything in British Malaya. Here a large harbour, nine miles in length, is enclosed by a group of islands. On Langkawi rises a tall granite peak. At its north-west corner a long serrated ridge of quartzite crosses the island, rising to 2,000 feet, and overlooks a mass of granite whence a river falls precipitously for over 100 feet. Beyond this ridge the country is wild, rough and uninhabitable. On the coast the beds of quartzite and shale dip steeply into the sea and break the force

of the south-west monsoon. There is no beach, no landing-place. But on the east of the ridge is fair country, rice-fields, granite hills with smooth slopes, long, open, sandy beaches.

The great harbour of the Langkawis is enclosed on the south by an island nearly formed of limestone. In the bright morning sunshine one can row slowly along the coast close to limestone cliffs that descend sheer into the water, or farther out where banks of jungle-trees can be seen above them. At the season, when new leaves are being unfolded, it is extraordinary how much red there is in the jungle of this island, and also how much pure green, said by most artists not to exist in vegetation. At the far end of the harbour is the Lion Island, its head formed by a limestone pinnacle; Tortoise Island also, so undercut by the sea that a biggish fishing-boat can shelter under its ledges during a shower. A little to the south is Telok Tasek, a quiet bay girt by castellated masses of limestone. Land here and a short walk through cool forest brings one to the gem of these islands, a little lake of fresh water clear as glass and so still it reflects like a mirror the bushes and trees that hide the rocky cliffs encircling it.

CHAPTER II

CLIMATE

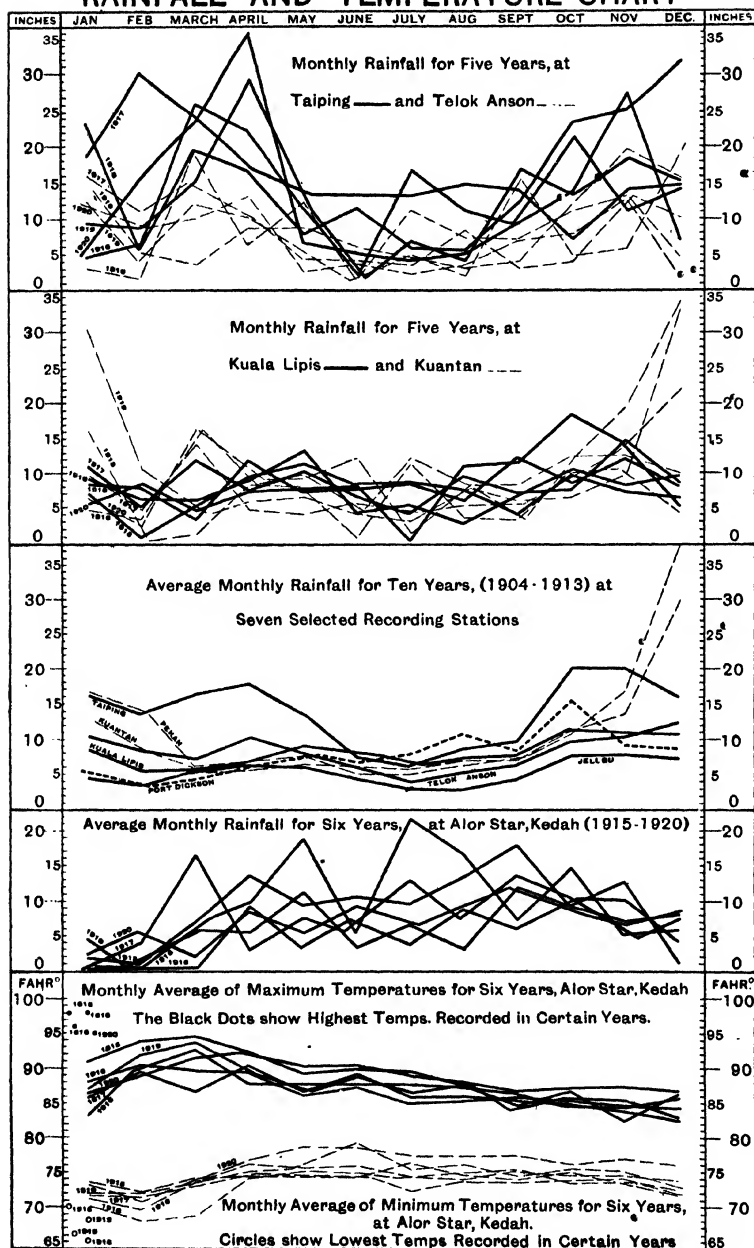
THE characteristic of the Malayan climate, considered generally, is monotony. This applies particularly to the temperature, which has a small daily range and no appreciable variation during the year beyond that due to greater or less cloudiness and the consequent differences of radiation. On the east coast, however, the north-east monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall.

RAINFALL.—The charts below have been constructed from published statistics, and are selected to show the general drop in rainfall south of Kedah in the middle of the year and also the local effects of topography.

In the top chart is given the monthly rainfall for five years at Taiping, a rainy station at the foot of the Bintang range, and at Telok Anson, a town near the mouth of the Perak river far from any large hills. The greater precipitation caused at Taiping by the Bintang range is marked. In both places there is a decrease of rainfall from May to August, and at neither is there a rainless month. Taiping and Telok Anson are chosen as typical stations on the west of the Peninsula, where the effect of the south-west monsoon is broken by Sumatra.

The second chart shows the monthly rainfall for five years at Kuala Lipis, far inland in Pahang, and at Kuantan, on the east coast. At Kuala Lipis February is not very wet. After February there is a general rise in rainfall until May, succeeded in some years by a distinct drop in July and August. There is a further rise culminating in October and November, before there is a fall to moderate rainfall in December and January. The Kuantan rainfall shows clearly the effect of the north-east monsoon. In November, it rises sharply in three of the years taken and continues rising to the end of the year. Early in the next year it falls abruptly. Sometimes, but not always, the monsoon produces very heavy rainfall in December.

RAINFALL AND TEMPERATURE CHART



• The third chart is of a more general character. It shows the average monthly rainfall for ten years at Taiping, Telok Anson, Kuala Lipis, Kuantan, Pekan (near the east coast), Port Dickson (on the coast of Negri Sembilan), and Jelebu (Negri Sembilan). This chart brings out well the general drop in rainfall in the middle of the year. It shows, too, how Pekan, like Kuantan, is affected by the north-east monsoon. The lines for Port Dickson and Jelebu, however, are of particular interest. At Port Dickson the first half of the year is, on the average for these ten years, distinctly drier than the second half, showing a local variation. Jelebu is remarkable as being the driest recording station although it is situated among the hills of the main range, a peculiarity doubtless due to the fact that hills on either side precipitate much of the moisture before it can reach the township.

In Kedah one approaches the higher latitudes where well-marked seasons exist, but the rainfall and temperature charts do not display much evidence of definite seasons, nor does the rainfall chart show conformity with those of the selected station farther south. There is a distinct drop in the rainfall in January, February and March, but not in the middle of the year. In October, however, the rainfall is high for all the six years charted.

• The bottom chart shows the monthly average maxima and minima shade temperatures for the same six years at Alor Star and also some of the highest and lowest temperatures recorded. Alor Star is selected again for this chart because it approaches the region of definite seasons, but the only marked variation seen is the higher maxima and lower minima in February and March, corresponding to part of the period of least rainfall, and caused doubtless by much sunshine during the day and unimpeded radiation on cloudless nights. For the rest of the year this chart would apply equally well to any other station in the Peninsula.

These statistics of rainfall and temperature are valuable, but without further details they may induce a wrong impression of the climate.

In the first place the distribution in time of the rainfall during the month and during the day is a matter of prime importance. The charts cannot bring out two points that make a great difference to life in the Peninsula: the brilliant sunshine, which is the rule during the morning, and the dry spells of a fortnight or more when grass on open places such as golf-links loses its usual fresh green colour. • Rarely drizzling rain, continues for most of the twenty-

four hours. Usually the rainfall is heavy and of short duration. Sometimes, too, it is local. For instance, the Kinta District may have heavy rain during one week, while Upper Perak has none; and one town in Kinta may be enveloped in a downpour that does not extend beyond a radius of two or three miles.

In the mountains the rainfall is very high, and scars on the mountain-sides show where the weight of water has caused landslips, which send jungle, boulders and soil hurtling downward. In 1911 such a landslip caused by a heavy downpour destroyed a large part of the Pahang road between the Gap and Tras. At "The Cottage" hill-station above Taiping, in the Bintang range, the average yearly rainfall from 1912 to 1919 was 258.89 inches. On the other hand, Jelebu, the driest station where records have been kept, had an average annual total from 1905 to 1919 of 60.39 inches.

TEMPERATURE.—The heat, owing to the moisture of the atmosphere, is at times oppressive, although 100°, it is believed, has never been recorded in the shade. In the Federated States, even at low elevations above sea level, the nights are cool enough for comfort, and a blanket is generally wanted in the early morning. On the highest mountains the thermometer has been known to fall at night to 46° Fahrenheit. Judging from statistics, Tanjong Rambutan is the hottest place in the Federated States, with a mean daily maximum of 95° in the shade. In 1917, Kroh, a station in Upper Perak some 1,000 feet above sea-level, had a mean minimum of 64°. Temperatures recorded in sunlight at Kuala Lumpor are from 140.6° to 151.3° Fahrenheit. The breezes, of course, have a beneficial effect in modifying the heat. This is particularly noticeable in Kedah and Perlis, when the north-east monsoon is blowing.

WINDS.—The Malay Peninsula lies within the region of the two seasonal winds known as the south-west and north-east monsoons, but owing to the barrier provided by Sumatra to the south-west, the only really strong wind is the north-east monsoon that blows from the latter part of November to March across the China Sea and the Gulf of Siam. During the period of the south-west monsoon, from May to October, gentle southerly winds prevail on the east coast and the southern parts of the Straits of Malacca. The north-east monsoon is strong on the east coast in December and January, and the state of the vegetation on the Tahan highlands proves it is strong at that altitude far inland. During the same months it is felt in North Kedah and Perlis also as a strong, cool

breeze, which sweeps across the Peninsula with no high mountains to check it.

On the west, and for a large part of the year on the east coast, a breeze blows off the land in the early morning, enabling boats to sail out to the fishing grounds. Dying down, it is succeeded by a sea breeze of greater strength blowing from the south-east, south, south-west or west. West of the main range the cooling effect of these sea-breezes penetrates far inland, but in the afternoon they are frequently disturbed by sharp squalls, preceding a torrent of tropical rain and blowing from any direction. Winds of the strength of a typhoon are fortunately unknown, but squalls sometimes do local damage to rubber estates and lightly constructed native buildings. In the Straits of Malacca violent squalls of wind and rain from the west are known as "Sumatras."

On the east coast the sea can be so unpleasantly rough during the north-east monsoon that coasting steamers may have to shelter behind the islands off Pahang and Johore and sailing-boats dare not go out to sea. Off the west coast of Lower Siam also, and off the coast of the Langkawi Islands and Kedah, the sea is sometimes so disturbed by the south-west monsoon blowing past the northern end of Sumatra, that navigation becomes difficult for small local steamers. In the confined space of the Straits of Malacca—that is, south of a line drawn due east from Pulau Weh (Way), the northern extremity of Sumatra—the winds are not strong enough to produce more than a choppiness, which is very trying to those who venture out in small launches, but is hardly felt by large ocean steamers holding on their stately course to Singapore. The English Channel can be much rougher than the Straits of Malacca.

CHAPTER III

GEOLOGY

It has been stated more than once that the dense forests of the Peninsula must hide the rocks to such an extent that the geological structure cannot be worked out. Owing, however, to the minute network of streams, the coast and island sections, the clearings and excavations made by man, and exposures on the hills, the amount of evidence available is not far short of that found generally in temperate climes.

In early references to the geology of the country, Archæan rocks are mentioned, but as far as is known no rocks bearing fossils older than the Carboniferous are exposed on the surface.

THE RAUB SERIES.—The oldest bedded rocks are calcareous for the most part, comprising calcareous shales and the limestones that form the limestone hills of Perlis, Kinta, and other localities. The limestone has yielded Carboniferous fossils in Pahang. In Lower Siam there have been found in rocks believed to belong to this series fossils that are interpreted by one author as indicating a Permo-Carboniferous age, by another a Lower Carboniferous age. In decalcified shales in Pahang fossils have been discovered that are believed to indicate a Permian age. The Langkawi Islands provide very good exposures of these rocks. Here the limestone, about 5,000 feet thick, is lying conformably above about the same thickness of shale and quartzite, with beds of impure limestone. No fossils have been found in this lower division. Above the limestone again are more shales and quartzite, apparently also without fossils. These calcareous rocks, which may have associated shales and quartzites, as in the Langkawis, have been described in other parts of the Peninsula as the "Raub Series," because of their large development near Raub, in Pahang. The fossils found so far indicate that the series was contemporaneous with parts, at any rate, of the Carboniferous and Permian of Europe. Similar rocks in Sumatra are clearly part of the same series.

THE CHERT SERIES.—Younger than the Raub Series is a widespread series of shales and quartzites, some of the latter being coarse

conglomerates. The sequence immediately above the Raub Series is not known certainly, but there is evidence in many places of a considerable thickness of radiolarian chert interbedded with shale and quartzite, followed by conglomerate, quartzite, and shale separated from the chert and associated rocks by an unconformity. The radiolarian cherts and the shales and quartzite with them are named the "Chert Series." It cannot be said that these beds always lie above the Raub Series rocks; they may be only a local development. The radiolaria are not well enough preserved to be of use in determining the age of the beds, but there can be no doubt that the rocks were deposited in shallow water. In one specimen rootlets of a vascular plant and cells from the stem of a conifer were found, together with well-preserved wood-cells. Both shales and chert often contain much carbon, and also pyrite in minute crystals formed by the reduction of iron sulphate by the carbon. This series is well exposed near Bentong in Pahang, near Jelebu in Negri Sembilan, and in South Kedah.

THE PAHANG VOLCANIC SERIES.—Before the deposition of the Raub Series ceased volcanic eruptions had begun, which continued later than the formation of the Chert Series. The rocks formed, all older than the granite, are named the "Pahang Volcanic Series," being widespread in that State. The series comprises rhyolites, trachytes, andesites and dolerites; also quartz-porphry, granophyre, porphyrite and serpentine. Ashes and breccias of similar composition are abundant.

SHALLOW-WATER ROCKS.—The shallow-water rocks above the Chert Series, or, where the Chert Series does not exist, above the Raub Series, consist of quartzite, mostly weathered to sandstone on the surface, shales, often altered over large areas to phyllites, and conglomerates in which the most abundant pebbles are quartzite, while many are chert and carbonaceous shale. A few pebbles of Pahang Volcanic Series rocks have been found. The rocks forming this series occur from Singapore to the north of the Peninsula. In Singapore they have yielded Mesozoic fossils with Upper Gondwana plant remains, which may be equivalent in time to the inferior Oolite. A marine Rhætic fauna is found near Kuala Lipis, and at one other spot in Pahang. In Perak a Triassic *Estheriella* is found in shales. The Rhætic fauna gives the best marked horizon in these rocks, which have some points in common with the Upper Gondwana rocks of India. Like the Raub Series, they have their counterpart in Sumatra. .

These shallow-water and estuarine beds are best exposed in the Tahan and Larong highlands, the country drained by the Tekai (a tributary of the Tembeling river in Pahang), in Upper Perak, where they form the peaks Kendrong and Krunai, and in Kedah, where Kedah Peak is formed of quartzite with intrusions of granitic rocks.

MESOZOIC GRANITE.—After the quartzites and shales were deposited, intense folding took place in Mesozoic times and permitted masses of granite and allied rocks to rise in the crust. Some of the granite carried tin, which was deposited both in the granite and the surrounding country rocks. The tin-bearing granites are usually



SHALE AND SANDSTONE.

very rich in silica. In Pahang hornblende granite occurs extensively in the Benum range and does not carry tin. Both the hornblende granite and the more acid granite contain large porphyritic crystals of felspar. These are irregularly distributed, so that a large mass of granite may appear to have none and another mass may be crowded with them packed closely together.

Gneissose structure of the granite formed by flow in the unconsolidated magma is found over large areas in the part of Upper Perak north of the Temengor river. In other parts of the Federated States gneiss has been formed by crushing of the granite during earth movements subsequent to consolidation.

• The granite seen in the mountains of the Malay Peninsula is Mesozoic in age, but there is evidence, corresponding with evidence in the Dutch Indies, of a Palæozoic granite. It is found as fragments in Pahang Volcanic Series ash on a small island, Pulau Nanas, off Johore, but has not been seen *in situ*.

After the granite had consolidated, denudation removed part of the rocks covering it. It is possible that a great thickness of Tertiary strata was deposited on the site of the Peninsula, but if so, denudation has removed nearly all of it, for there are only three small patches known, one in Selangor with sub-bituminous coal, which is being worked, another near Enggor in Perak with a small seam of similar coal, and another on the borders of Perlis and Singgora with traces of coal.

• Cutting the Mesozoic granite are dykes and masses of dolerite. On the east coast there occur also rhyolites that are believed to be younger than the granite. Both dolerite and rhyolite may be contemporaneous with eruptions in Sumatra in late Tertiary and Pleistocene times. Strong shearing along faults in the Mesozoic granite, observed at several localities, probably marks the effect of strong earth movements known from evidence in Sumatra and Borneo to have occurred in Tertiary times.

• ALLUVIAL DEPOSITS.—The coastal alluvial deposits are extensive. Their depth is unknown, but a bore 352 feet deep near the mouth of the Bernam (the boundary between Perak and Selangor) failed to reach the bottom of them. They contain much decaying vegetation, brackish water, and in some places marsh gas has been tapped by bores. Raised beaches (*pĕrmatang* Malay) occur inland on these alluvial deposits.

The alluvium of the rivers inland is in some places rich in tin ore, that has yielded much revenue to the States. In other places, such as Kenaboi in Negri Sembilan and Tapah in Perak, gold is mixed with the tin ore. In Pahang, Kelantan, Lower Siam and Negri Sembilan gold is found in alluvium in small amounts without tin ore. In the Kinta District lignite occurs in recent alluvium over limestone, but no seams of commercial importance have been discovered. Stone implements also are found in alluvium, and excavations in recent deposits on the floors of the limestone caves have yielded interesting collections.

LATERITE.—A widespread and useful recent formation is laterite. In Malacca this occurs above granite and has been used as a building stone—for instance, in the old Portuguese church on the

Residency Hill. In the rest of the Peninsula the term is applied generally to ferruginous red earth and masses of hydrated iron oxide formed above shales and phyllites. The Malayan laterites are not known to contain hydrated alumina in any noteworthy quantity. The Malacca laterite has the physical properties of the Indian laterite, which are that it can be cut easily into convenient blocks for building purposes and hardens on exposure after quarrying.

A welcome negative feature of the geology of the country is the absence of volcanoes and severe earthquakes.

Thermal springs occur in many localities.

CHAPTER IV

MINERALS

THE most important mineral in the Malay Peninsula is the oxide of tin known to mineralogists as CASSITERITE. It occurs as an original mineral in the granite—that is, as a mineral formed in the hot magma during cooling; in the rocks surrounding the granite, quartzite, shales, phyllites, schists and limestone, where it forms veins (and, in the limestone, pipes), and in detrital deposits and soil derived from the foregoing rocks. Although the tin ore always occurs close to granite, it by no means follows that everywhere in the Malay Peninsula granite has tin ore associated with it. There are large tracts of granitic rocks that appear to be quite barren of the ore. Its occurrence is patchy, with the result that there are a number of more or less well defined tin fields in the Peninsula. The concentrates of tin ore from the mines are in the form of sand in which good crystals are not often seen, though in some localities fine examples have been found. In the limestone of the Kinta District cassiterite occurs in pipes and veins, and is generally associated with large quantities of metallic sulphides, particularly arsenopyrite. Cassiterite sometimes occurs in “stockworks” of thin veins in sedimentary rocks: one such stockwork has been found in limestone. A notable example of a stockwork in shales was found at Bruseh, near Bidor, in Perak. On Bujang Malaka, near Kampar, a detrital deposit was discovered in 1908 that consisted largely of well-developed crystals of cassiterite. At Bundi, in Kemaman, spongy masses of a honey-yellow colour were found consisting of long, interlocking needles of cassiterite. A remarkable deposit of tin ore was discovered about 1902 in Perak, and named after Jehoshaphat, for reasons that are obscure. It occurs in a cleft in a limestone hill and is formed of alluvial ore, partially concentrated, almost perfectly rounded, and cemented by calcite to form a hard mass requiring milling. During mining well-preserved teeth of a wild pig were found in this ore. Another unusual deposit was found at Lahat. A tin-bearing pipe in limestone had become

a channel for a stream of water. The ore was disorganised by solution of the calcite, and the sulphides were oxidised, to a depth of over 300 feet. Beyond, traces of the original structure were found. Later the flow of water ceased and the disorganised ore cemented by calcite to form an irregular, iron-red mass.

Sometimes, and particularly in clays over the limestone, very rich deposits of tin ore are found, requiring little treatment before being sold. Usually the amount of tin ore in the ground treated is low. In detrital deposits it is measured in *katis* per cubic yard. Half a *kati* per cubic yard can now be worked profitably by dredging, which is roughly .015 per cent. of tin ore in the ground treated. In lodes where milling is necessary, the proportion must be about 2 per cent. to make working pay unless a very large output can be maintained and power is cheap.

TUNGSTEN ORES are found in several parts of the Peninsula.

Wolfram occurs on the Dungun and elsewhere in Trengganu. In Kedah a very rich deposit was worked near Changloon during the war. It is reported to occur in Lower Siam. In Perak wolfram has been won for several years from veins in tourmaline granite near Tapah. It occurs in small quartz-veins with tin ore. In Negri Sembilan wolfram is worked in veins at Titi.

Scheelite is found in limestone country in Selangor and in similar country in Perak. It is found also in small quantities in the Raub gold-lodes.

Crystalline tungstite has been found at Pulau, in the Kinta District.

Tungsten ores are usually mixed with tin ore, and, like it, are derived from granite. Wolfram is separated magnetically, but scheelite, if mixed with tin ore, cannot be so separated, and is sold as a mixed concentrate for chemical treatment elsewhere. The supplies of tungsten ores from the Malay Peninsula were of great value during the war for the manufacture of self-hardening steel.

GOLD occurs chiefly in association with the Pahang Volcanic Series rocks and the less acid granites. It is mostly confined to a belt of country stretching northwards from the neighbourhood of Mount Ophir through Pahang between the main range and the big quartzite and conglomerate outcrop of Tahan and the Tekai, through Southern Kelantan, then turning slightly westward and entering Lower Siam at Panchor and Tomoh, and Upper Perak in the headwaters of the Perak river. Nowhere have very rich

deposits of gold been found, but the small quantities available can be worked at a profit by Asiatics. The Raub Australian Company's gold mines are the only deep mines now working on a large scale. The gold occurs in veins and in alluvium. In the veins specimens of visible gold are not common. In alluvium it is fine in grain. Gold is sometimes mixed with tin ore, as noted above.

GALENA (lead sulphide) occurs in limestone country. It has been worked in the Langkawi Islands and in Larut. It occurs in the hills that form the western border of Perlis, and in several other localities, including, it is reported, Kelantan, but no extensive deposits of the mineral have been found. It always contains some **SILVER**, generally between twenty and thirty ounces to the ton, but specimens with much higher silver contents have been found.

GERUSSITE occurs in Kinta.

COPPER ores have been worked on a small scale. Some fine specimens of malachite were found in Kinta. The most interesting form of copper noted was as very minute but perfect crystals of the native metal occurring as an impurity with tin ore in Kinta.

PYRITE is widespread, but the only known deposit of any size and likely to be workable is in Kemaman. **ARSENOPYRITE** is abundant in tin deposits in limestone.

IRON oxides are abundant. Limonite is found in laterite. A large vein of hæmatite is worked on the Pahat river, Johore. Another large vein occurs near Ipoh. Micaceous hæmatite is known to exist in the granite of the main range. Magnetite veins are found on Kedah Peak, and are reported in Trengganu.

MONAZITE is widespread. It occurs with tin ore and can be separated magnetically. This mineral is valuable as containing the thorium used in making gas-mantles. The percentage varies considerably. Although a common mineral and although some contains a good percentage of thorium, no regular market has been found as yet for Malayan monazite.

CHINA CLAY, or kaolin, is now being worked experimentally at Gopeng. There are large supplies of excellent quality, and it is hoped that they will give rise to a new industry.

MANGANESE oxides have been found in Kinta and the Langkawi Islands. No sales have been effected as yet, and there is not much hope of sufficiently large deposits being found. Black oxide of manganese, sometimes crystallised as pyrolusite, often occurs on the surface of limestone under clay.

CORUNDUM occurs in boulders of the pure mineral on the east

side of the Kinta valley, and on the west side in a rock consisting of corundum and tourmaline, or corundum and mica. Some of the tourmaline-corundum has been used as emery. The pure corundum is used locally to a small extent.

ASBESTOS.—The fibrous serpentine variety of asbestos (chrysotile) is found in Negri Sembilan. The fibrous form of tremolite occurs in sheets ("mountain leather") in limestone at Pulai in the Kinta District.

FLUORSPAR occurs in quantity with scheelite on the east side of the Kinta valley. It is generally colourless.

BARYTES occurs at Pong in Upper Perak.

TITANIUM is available in large quantities in ilmenite, a common heavy impurity that occurs with tin ore.

GARNETS have been discovered in several localities, but not sufficiently well preserved to be of value for ornament or abundant enough to be used as an abrasive.

Small colourless crystals of **TOPAZ** were at one time common at Chenderiang.

MICA is worked on a small scale near Kedah Peak.

QUARTZ forms very large veins in Selangor and Negri Sembilan, and might be utilised for glass-making, or as an abrasive.

The limestone of the Raub Series is worked as **MARBLE**. The stone varies from pure white to black. The same limestone is also used for **LIME** and **CEMENT**.

PHOSPHATE is found in caves in the limestone hills. The best deposits are in Perlis.

Sub-bituminous **COAL** is worked in Selangor. A vein of similar coal is known at Enggor, and thin veinlets in Perlis.

OIL SHALES are known in Selangor and Perlis, but the oil contents are insufficient to repay distilling.

CHAPTER V

FLORA AND FORESTS

FROM sea level to the tops of its highest mountains the Peninsula was clothed originally with a continuous and dense cover of vegetation. This cover has been broken wherever man has settled, and his permanent settlements have caused profound changes in its composition or have destroyed it entirely. It is altogether probable that a number of species have become extinct as a consequence of man's activity, and the original flora has been replaced by one of a different type composed of plants introduced, in part, by human and, in part, by natural agencies. The flora of all towns and settled communities is of this mixed type and includes the usual food and ornamental plants, most of which have been introduced. The transient European resident is often a town-dweller, and has no acquaintance with the characteristic vegetation of the country. For the plants around him are food plants and weeds; shade trees such as the rain tree (*Samanea Saman*), Sena (*Pterocarpus Indicus*), and fire tree (*Poinciana regia*); and flowering shrubs and creepers, few of which are indigenous.

The first striking thing about the natural flora is its great richness and extreme complexity. The recorded species of flowering plants and ferns number more than 9,000. Of these, by far the largest part are woody and about 30 per cent. are trees. The number of tree species recorded from the Peninsula is greater than the number known from all British India and Burma. The original cover of the country was forest, and to forest, if unmolested for a sufficient time, the cleared areas will return.

SUCCESSION OF FORMS ON CLEARED AREAS.—When an area is felled by the aboriginal forest dwellers of Malaya, it is usually for the sake of one or two crops, after which the clearing is abandoned and grows up into grass and brushwood. Grass land that is often burned becomes covered with practically a pure growth of *lalang* (*Imperata spp.*), a coarse grass, which seems to be stimulated by frequent burnings. If protected from burning for as long as one

year, the cover ceases to be pure *lalang* and is very much mixed with other coarse grasses and with various shrubs. One of the first shrubs to win its way is the *sëndudok* (*Melastoma malabathricum*), and various forms of *Clerodendron*, *Flemingia strobilifera* and *Desmodium* soon follow. Not long afterwards a number of small trees, such as *mahang* (*Macaranga* spp.), *mënarong* (*Trema amboinense*), *Arthrophyllum diversifolium*, *mëmpoyan* (*Rhodamnia trinervia*), *chëndërai* (*Grewia* spp.) and *tiup-tiup* (*Adinandra dumosa*) appear. Most of these are comparatively short-lived trees, which, if undisturbed, may serve as a nurse crop for the trees of the high forest that gradually spring up. The length of time required for a cleared area to return to high forest is not known, but probably it is not less than 250 years.

CHARACTER OF INLAND FOREST.—The dry-land forest below an elevation of 2,000 feet is the most characteristic type of vegetation of the Peninsula and covers the largest area. It consists of several storeys, the topmost having an average height of 150 feet, with occasional trees more than 200 feet high. This top storey forms an almost complete canopy. Underneath it, and sometimes growing up into it, are a number of trees whose average height is usually not much more than 100 feet. Below there is a third storey composed of small trees and shrubs, and often beside this third storey there is a fourth of low-growing plants that cover the floor of the forest. The trees of the top storey are *këruing* (*Dipterocarpus* spp.), *mëranti* (*Shorea* spp.), *chëngal* (*Balanocarpus* spp.), *jëlutong* (*Dyera* spp.), and many other large-growing trees. The second storey contains trees, such as *pëtaling* (*Ochanostachys amentacea*), *pënarahan* (*Myristica* spp.), *tëmpinis* (*Slatia sideroxylon*) and *mëdang*, various species of *Lauraceæ*. The third storey is made up of a large number of species of the families *Anonaceæ*, *Euphorbiaceæ*, *Flacourtiaceæ* and so forth. The fourth storey contains many small palms and herbaceous plants, such as *Sonerila* of the *Melastomaceæ* and various small species of the *Gesneraceæ* and *Rubiaceæ*. There are some ferns, too, in this storey.

It is very evident that this type of forest is adapted to make the most complete possible use of the light available. The forms occupying the top storey are those that demand full light, while the forms in the lower storeys are to a greater or less extent tolerant of shade. Wherever there is sufficient light, the branches of the large trees are often found to be clothed with orchids, ferns and other air plants. There are also large numbers of climbing plants,

which may start at the floor of the forest and climb to the top of the highest trees where they can secure light. The struggle for light is very apparent wherever an opening has been made in the cover, and plants that have been growing at a very slow rate because of insufficient light are suddenly found to be growing with great rapidity when light becomes available. An interesting fact with regard to the species composing the top storey is that their seedlings and saplings are capable of existing with very slow rates of growth for many years, perhaps a hundred years or more, when the supply of light is insufficient, and are able to shoot up very quickly when the cover over them is removed. Light seems to be the most important factor in controlling the occurrence and distribution of forms in the forest, and those portions of the forest, such as small ravines, that are permanently dark, have a very different type of flora from portions more favourably situated for light. In general the portions of the forest most valuable commercially are located on gentle ridges or at any rate where a supply of light is abundant.

The undergrowth in Malayan forests is exceedingly dense, but less so than that in evergreen forests where there is a pronounced and prolonged dry season. The thickest undergrowth is found in forests least valuable commercially, for the reason that here it has a larger supply of light than in the more valuable forests, and so can develop more vigorously. The most troublesome factor in the undergrowth is the *běrlam* (*Eugeissonia tristis*), a clump-forming, almost stemless, spiny palm, which is so common in many of Malaya's forests as to cause a great deal of discomfort to those travelling through them.

COLOUR IN THE FOREST.—Most people are impressed with the relative lack of bright colours in equatorial forests, as compared with the forests of temperate regions. This is because the forests of temperate regions display very vivid colours after the close of the growing season, when the leaves are nearly ready to fall. It is probable that the amount of colour shown by a given area of tropical forest in the course of a whole year is considerably greater than that shown by a similar area of a temperate forest in the same time, but the lack of a sharp seasonal change and the very great wealth of foliage to a certain extent obscure the display. Colour in equatorial forest is due mainly to the display of new leaves, which are often of a very bright hue.

Pěnaga (*Mesua ferrea*) is a tree of the second storey with new leaves a showy pink or red. *Pěrah* (*Elatiospermum Tapos*) is a large tree whose young leaves of vivid crimson make the forest very

brilliant at times. *Pometia pinnata*, a small tree found along jungle streams, has new leaves of a bright red, which are frequently abundant enough to outline the course of the water. Some other trees, such as *sĕraya* (*Shorea Curtisii*) and *mĕranti tĕmbaga* (*Shorea leprosula*) lend a conspicuous tone to the forest because of the light colour of the underside of their leaves, so that when seen from a distance the forest cover has a grey or bronze tint.

It is seldom that flowers give colour to any large area of forest, but they often provide very bright spots. Examples of this are the various species of *Saraca*, small trees along streams, that have large clusters of yellow or orange flowers on their trunks. *Bauhinia flammifera* and other species are large climbers that bear very big clusters of yellow, orange, or red flowers, which are most conspicuous: they are most abundant at the edge of a forest and sometimes grow over the tops of tall trees in rather wet jungle.

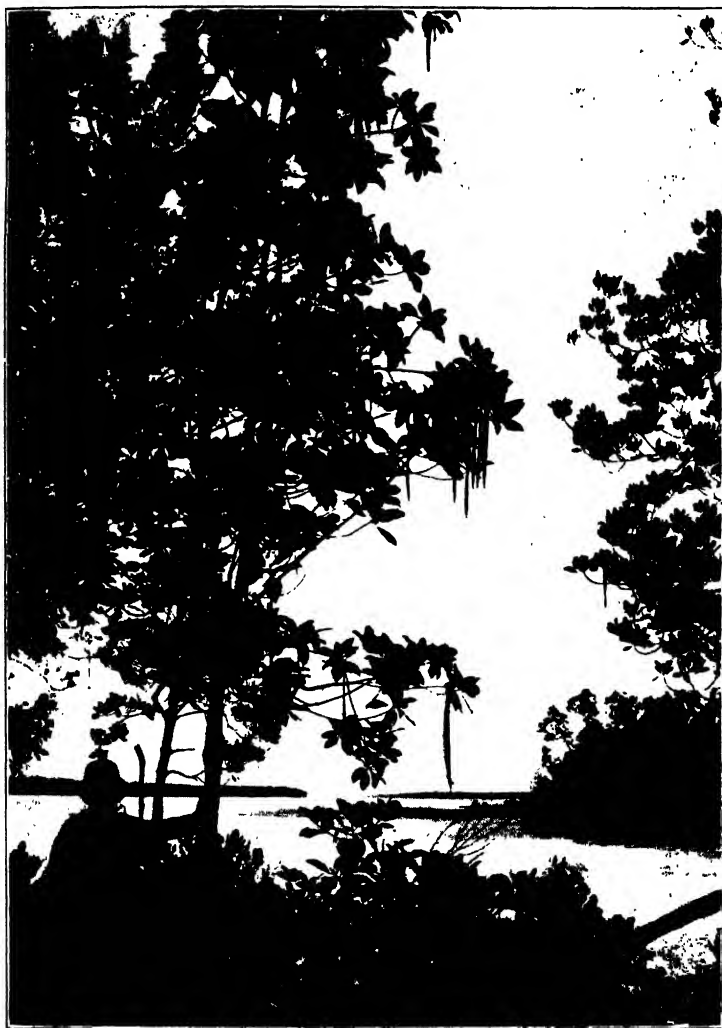
PALMS AND BAMBOOS.—Most people, upon their first visit to a tropical forest, are disappointed at finding that palms are not the most prominent feature of the landscape. Palms are present in considerable number and variety, but there is such a great development of broad-leaved trees that sometimes the palms are almost unnoticed. In any extensive forest area there are many climbing palms known as rattans. The *bĕrtam* palm, so troublesome in undergrowth, has been mentioned already. Another kind of palm, very common in the undergrowth, is known as *palas* (*Licuala* spp.). There are also a large number of erect palms, but they are not noticeably abundant. Bamboos are sometimes found, but they are never so plentiful as in regions with a pronounced dry season.

There appears to be no general flowering season. Individual species seem to have no fixed time for flowering, and apparently any time of drought followed by soaking rains will bring many of the tree species into flower. The methods of seed dispersal in the jungle are very numerous, but there is marked poverty of forms that have wind-borne seed, such as the *Compositæ*.

SPECIAL TYPES OF FOREST.—There are several very distinct types of forests beside the dry low-land forest, already considered, which covers by far the largest part of the Peninsula.

Mangrove Swamps.—Along the sea coast wherever there are mud flats alternately exposed and covered by the tides, there is developed the mangrove type. The most remarkable members of this type of forest belong to the family *Rhizophoraceæ*, and show curious physiological and structural adaptations to their surround-

ings. A narrow sandy or rocky strip along the coast is occupied by certain characteristic species, such as *kayu ru* (*Casuarina equisetifolia*), *Hibiscus tiliaceus*, *mata ikan* (*Hernandia peltata*), *pēnaga*



MANGROVE WITH SEEDLINGS.

laut (*Calophyllum Inophyllum*), *Dodonaea viscosa*, and *putat* (*Barringtonia speciosa*).

Fresh-Water Swamp Forests.—Probably as much as one-tenth

of the surface of the Peninsula is covered by fresh-water swamps. These show different conditions as to drainage and depth of water, but in the main they are unfavourable to development unless extensive drainage systems are undertaken. Some of the swamp areas have a sufficiently high-water level to prevent the development of trees, but generally there are found at any rate small islands or hummocks upon which trees grow. Some of these trees have economic value. *Malabera* (*Fagraea fastigiata*), *punah* (*Tetramarista glabra*), and *měranti bakau* (*Shorea spp.*) are forms that furnish very useful timber, but it is often very difficult to remove them from the swamp. Certain of the swamp forms



SONNERATIA ALBA, SHOWING AIR-ROOTS.

have remarkably developed pneumatophores or air roots: an example of this is *Lasianthera Secundiflora*. Travelling through these fresh-water swamps is very arduous because of the uncertain footing and the presence of numerous spiny plants in the undergrowth. Abundant and troublesome forms are *měngkuang* (*Pandanus spp.*) and *kělubi* (*Zalacca spp.*).

In various places where the water level is not high there is found a thick mass of plant remains that is known locally as *peat*. This contains a good deal of humus, and has accumulated in consequence of poor drainage and the resulting acid condition of the soil. It is not common to find thick layers of humus where

the forest is well drained. A few forms of trees that occur in the dry forest are found occasionally in the peaty soil also. The most conspicuous of these is the very large tree known as *kěmpas* (*Koompassia malaccensis*).

Mountain Forests.—Hills or mountains that are more than 2,000 feet high bear types of forest very different from those in the lowlands. The flora of these hill forests is very complex and of little economic value at present. Some of the conspicuous forms of the higher hills are *damar minyak* (*Agathis alba*), *ru bukit* (*Dacrydium elatum*), *Dacrydium Baccarii*, *Dacrydium falciforme*, *Podocarpus imbricatus* and numerous members of the orders *Ericaceæ* and *Vacciniaceæ*. A noteworthy feature of these forests is the relatively short length of tree trunks, and the abundance of lichens, mosses, ferns, liverworts and orchids that clothe them, sometimes to a thickness of 2 or 3 inches.

AREA OF THE FORESTS.—The area of the forests of the Peninsula is believed to be approximately as shown in the following table:

	Merchant- able.	Unprofit- able or In- accessible.	Total Forest.	Total Area of the Country.
<i>Straits Settlements :</i>				
Square miles	166	100	266	1,508
Percentage of total area	11	7	18	100
<i>Federated Malay States :</i>				
Square miles	13,500	7,500	21,000	27,500
Percentage of total area	49	27	76	100
<i>Unfederated Malay States :</i>				
Square miles	7,500	6,500	14,000	23,486
Percentage of total area	32	28	60	100
<i>Total :</i>				
Square miles	21,166	14,100	35,266	52,494
Percentage of total area	40	27	67	100

Unfortunately, owing to the extensive alienation of land in those parts of the country that have the best means of communication, the forests are not well distributed, and great difficulty is already being experienced in parts of Perak and Selangor in supplying the demand for fuel for railways, mines and rubber factories.

UNPROFITABLE AREAS.—Beside inaccessible forest areas there are others unprofitable for several reasons. Fresh-water swamps cover about a tenth of the surface of the Peninsula, and the forest they

produce has in the main no commercial value. Hill forests above 2,000 feet high are put in the same class, because at present they do not pay to work and because it is desirable to preserve them as a protection for water supplies and drainage and to prevent erosion on steep slopes; these highlands seem to occupy more than a tenth of the surface of the Malay Peninsula. A third type of unprofitable forest is that spoilt by the action of man. For many generations aboriginal nomad tribes have pursued a shifting system of agriculture that has led to the destruction of large areas of forest, which, however, could be brought back into a productive state by careful handling for a few generations. There has also been great destruction of timber in the clearing of plantation sites. It has been the practice to select a good forest area as the site of a plantation and, after cutting down all the trees, to burn them. It is estimated that there has been a loss of more than 50,000,000 tons of timber in this way during the past twenty years.

The total consumption of timber and firewood in the Peninsula is above 5,500,000 tons a year, and the new growth appears to be very much less than this amount. It is extremely doubtful if the countries of British Malaya can permanently produce enough timber and firewood for themselves. So it is unlikely and undesirable that timber should ever be exported on any large scale. In fact, export of timber will be justified only in the case of a few of the more abundant and less durable woods, which may be in danger otherwise of being wasted.

COMPOSITION OF THE FORESTS.—The mangrove swamp forest occurs only along the coast and is of the same composition as similar forests in other parts of the Eastern tropics. The inland dry forest closely resembles that of the Netherlands Indies, Borneo and Sumatra. The kinds of wood are the same as in these other regions, and are produced by the same or related species. A single square mile of forest usually contains several hundred species of trees, but most of the volume of timber produced is contained in but a few of these. More than half of the commercial wood of the Peninsula is produced by trees of one family, the *Dipterocarpaceæ*. These and other important woods are described in an Appendix. Just as teak is the standard wood of Burma and Siam, so the standard timber of Malaya is *chēngal*, but *rēsak*, which appears to be similar to the Burmese *Thitya* (*Shorea obtusa*, Wall.) and the Indian *Sal* (*Shorea robusta*, Gaertn. f.), is equally good and possibly better. *Kēruing* is closely allied to the Gurjun and Kanyin (*Dip-*

Dioscorea spp.) of India and Burma. The different forms of *mèrantî*, which are usually obtained from the softer *Shorea*s, have no exact counterpart in India and Burma, but are common throughout the Malay regions and in the Philippines, and take the place for general purposes of the deals of Europe. *Sèraya*, *mèrawan*, and *mèrantî Pahang* are intermediate in value and quality between *chèngal* and *mèrantî*, but the term *sèraya* is often applied in Singapore not only to *mèrantî*, but also to timbers belonging to the natural order *Sapotaceæ*. Most of the better timbers do not float, at any rate when green, and some of them are extremely hard.

For firewood the most highly prized woods are the mangroves.

MINOR PRODUCTS.—The principal minor forest products are canes, gutta-percha and *damar*.

Although Singapore is one of the world's most important markets for CANES, only a small proportion of the canes handled there are grown in the Malay Peninsula. Large quantities (of an estimated value in 1918 of about \$2,500,000) are imported in the rough state from other countries in the Malay Archipelago, cleaned and otherwise prepared in Singapore, and then re-exported, chiefly to India, Western Europe, the Far East and the United States of America. The most important commercial cane of the Malay Peninsula is *rotan sèga* (*Calamus cæsius*, Bl.), but the cane which is probably best known to the general public is the Malacca cane, *rotan sèmbambu* (*Calamus Scipionum*, Lour.). In 1919 the revenue from canes in the Federated Malay States and Straits Settlements was about \$20,000, representing a value of ten times that sum at least. No estimate can be given of the quantity cut for local use, on which no royalty was paid.

Singapore is also the world's market for GUTTA-PERCHA, and formerly large quantities were produced in the Malay Peninsula. The native methods of extracting the gutta unfortunately involved the destruction of the trees, and, owing to the value of the product, comparatively few of the true gutta-percha trees (*Palaquium oblongifolium*, Burck.) are left in the Peninsula, and the annual output is probably less than twenty tons. Plantations of gutta-percha are now being formed, and in the near future Malaya will again become an important source of supply.

The principal DAMARS of the Malay Peninsula are the product of a number of Dipterocarps, the most important being the transparent *damar pènak* or *damar chèngal* yielded by *Balanocarpus* spp. and

produced chiefly in Negri Sembilan (where almost alone are to be found Malays who will climb the trees to take the damar from the branches); and the nearly transparent *damar mata kucing*, which is



TAPPING GUTTA-PERCHA.

produced by certain species of *Hopea*. The inferior damars, which are usually opaque and are generally known as *damar batu*, are of comparatively little value, and until 1919, when royalty was

paid on more than 250 tons, were seldom extracted for trade purposes.

OTHER JUNGLE PRODUCTS.—There are produced in the forests of the Peninsula a large number of different products in small amount. Most of these, though they may be important to the local population, are of little significance as regards export. Brief mention may be made of a few of them.

INCENSE WOODS are usually known as *kayu gaharu*, and are produced by *Gonystylus spp.* and *Aquilaria spp.* In these the heart wood is occasionally found to be dark coloured and will give a pleasing odour when burnt. This scented wood is exported, and is employed in the preparation of incense, which is used in various religious ceremonies. The value of the better grades is considerable, and they are sold sometimes for as much as \$7 to \$10 per pound. A less valuable kind of incense wood is obtained from the roots of *kayu laka* (*Dalbergia parviflora*, Roxb.), a coarse climber, which occurs in Eastern Pahang. This form is exported principally to China.

Occasional trees of *kapor* or BORNEO CAMPHOR WOOD (*Dryobalanops aromatica*) are found to contain small deposits of crystalline camphor, which is considered by the Chinese to have special virtue as a medicine, and commands very high prices. The total amount of this product is small.

There are found numerous forms of fruits and roots and other jungle products that are used by the local people as food, but practically none of these are exported. There are also many medicinal and poisonous plants, but they also are of local importance only.

OWNERSHIP OF THE FORESTS.—Except so far as forest land has been alienated for rubber planting, mining and other purposes, and is not yet cleared, all the forests belong to the State. The control of all reserved forests is in the hands of a special Forest Department, but other forest land, though administered by that department for the exploitation of forest produce, can be alienated by land officers subject (in the Federated Malay States) to previous reference to the Conservator of Forests or State Forest Officer in every application involving more than 100 acres. The area of forest controlled by municipal and other bodies is negligible.

FOREST REVENUE.—Forest revenue is calculated on the basis of a charge not ordinarily exceeding 10 per cent. of the local market value of the product concerned. The following table gives the

statistics of Income and Expenditure for the years 1915-19 inclusive :

<i>Particulars.</i>	1915.	1916.	1917.	1918.	1919.
STRAITS SETTLEMENTS:	\$	\$	\$	\$	\$
Revenue	16,718	23,372	25,594	35,479	65,754
Expenditure	31,126	30,971	32,364	33,576	34,064
Surplus	—	—	—	1,903	31,690
Deficit	14,408	7,600	6,770	—	—
FEDERATED MALAY STATES—					
<i>Revenue :</i>					
Timber	224,774	266,200	318,238	379,904	412,235
Firewood and charcoal ..	202,266	228,691	357,959	563,460	1,322,979
Other sources	87,143	81,692	70,422	93,759	97,301
Total	514,184	576,583	746,619	1,037,123	1,832,515
<i>Expenditure :</i>					
Personal emoluments ..	229,599	226,515	240,355	276,901	323,560
Other charges	94,098	112,915	134,440	244,210	1,018,078
Total	323,697	339,430	374,795	521,110	1,341,638
Surplus	190,487	237,153	371,824	516,012	490,878
KEDAH:					
Revenue	18,587	46,125	73,263	74,466	—
Expenditure	10,407	22,476	28,697	34,039	—
Surplus	8,180	23,649	44,566	40,427	—
JOHORE:					
Revenue	25,000	43,300	25,000	38,200	44,400
Expenditure } Estimates	12,500	21,650	12,500	19,100	22,200
Surplus	12,500	21,650	12,500	19,100	22,200

Particulars are not available for Kelantan and Trengganu.

CHAPTER VI

FAUNA

VERTEBRATES.

THE fauna of British Malaya belongs exclusively to the Indo-Malayan province of the Oriental region, which comprises the Malay Peninsula, part of Tenasserim up to about the latitude of Tavoy and the great islands of Sumatra, Borneo and Java, with the adjacent smaller groups. Over this vast area, excepting possibly Java, the fauna in the lowlands is homogeneous and presents only minor local variations, showing that in times geologically recent all the districts must have been connected by land.

The mountainous districts, however, while exhibiting close similarities amongst themselves, have a distinctly different character from the lowlands. Their fauna shows so intimate a relationship with that of the great Himalayan ranges as to extend often to identity of species. These outliers are generally ascribed to the operation of secular variation in climate.

The fauna of the region, depending on the most luxuriant forest growth on the earth's surface, is probably the richest, or at any rate the most varied, now existing, though in number of species it is exceeded perhaps by the equatorial districts of South America.

Curious and unexplained affinities between Malayan and West African forms of life, especially amongst the birds and insects, have attracted much attention, and many anthropologists believe it was in the Malay region that Man as distinct from his Simian ancestors was first evolved.

MAMMALIA.—The anthropoid apes are represented by three species. Of these the *siamang* (*Symphalangus syndactylus continentis*) is the largest and rarest, being found sparingly in the hills from the north of Perak to Selangor and Negri Sembilan, but not in Johore or the Colony. It is a powerful monkey with long arms, having a spread in old individuals of more than five feet. It is black, sometimes with a whitish muzzle, and has a pouch of bare skin under the chin. In captivity it is affectionate, though

old males are apt to become savage and can inflict a dangerous bite. Much smaller are two or three species of gibbons (*Hylobates* spp.; *wak-wak*, *ungka*, Malay). The call of one of them, a penetrating and pathetic wail, is heard in the early mornings in jungle districts. One species is sooty black, with a white ring round the face, and white hands and feet; another almost uniformly black, while white or rather yellowish-white or fawn varieties are met in some districts to the exclusion of the dark varieties. Gibbons are docile in captivity, cleanly in habits and affectionate, but they are delicate and rarely long survive a journey to Europe. In the Peninsula they are widely spread, though seldom found near the sea or as high up the mountains as the *siamang* and not occurring in Singapore or Penang islands.

The leaf monkeys (*lotong*, Malay) are allied to the *langur* or sacred Hanuman of India, and are widely represented throughout the Oriental region, being most numerous in Borneo. Four distinct species are found in the Peninsula, all with very long tails and black, dull grey or silvery fur. The young generally differ greatly from their parents, being in one form almost white and in others a rich orange yellow. One species (*Presbytes cristatus*) lives almost exclusively in mangrove swamps, another (*P. obscurus*) among casuarinas on the coast, but most are commoner in virgin jungle near the hills, being found even as high as 6,000 feet. They squat on high trees, four or five to forty or more together, and seldom descend to the ground. Their food consists mainly of leaves and young shoots. They are rarely seen in captivity.

To the macaques belong the dull brown *běrok* or coconut monkey (*Macaca nemestrina*) and the *kěra* or crab-eating macaque (*M. cynomolgus* or *fascicularis*). The former inhabits low-country jungle, and in its wild state is rather local in distribution. Country Malays capture it when young and train it to climb coconut palms and pick any nut indicated by its master. Specimens in captivity are somewhat dwarfed, but males approaching a small retriever in size are met both in the wild and domesticated states. They are powerful brutes, and have been known when molested to inflict serious injuries on persons. They have short, stumpy tails, and like the baboons, which they resemble superficially, have hind limbs very much shorter than the fore. Their hindquarters have naked callosities, which at certain seasons are coloured bright red. Old animals have a neck ruff of long hair. The *kěra* monkey, though closely related to the *běrok*, looks very different, having both fore

and hind limbs of approximately equal length and a tail slightly longer than the body. It is a dull greenish grey, the back and head frequently tinged and speckled with golden brown. It is commonest in mangrove swamps, where at low tide numbers search the mud for a diet of crabs, small fish and molluscs. Though a powerful swimmer, in crossing narrow creeks it sinks and walks along the bottom. This habit may be due to fear of crocodiles to which many fall victims.

The slow loris (*Nycticebus tardigradus* ; *kongkang*, *kěra duku* or *nilong*, Malay), one of the family of lemurs, is somewhat like a sloth. It is about the size of a small cat, and the colour of the fur varies from a silvery grey to a rusty brown, usually with a darker stripe from the nose to the rump, but its most characteristic point is its large eyes. In habits it is nocturnal. Frequently it is carried on Malay ships with the idea that its presence will insure a favourable wind.

Chief among the CARNIVORA is the tiger (*Felis tigris* ; *rimau*, Malay) which, though not reaching the size of large Indian specimens or of the magnificent Manchurian variety, is a formidable animal. The average total length of the male is about 8 feet 4 inches, while tigresses are about a foot shorter. It ranges far up the mountains, and occurs also in the mangrove zone, but its scarcity or abundance in any given district depends on the absence or presence of pig and deer which form its main food, though the stomach of a fine male shot near Kuala Lumpor contained nothing but frogs. Man-eating tigers are not rare, though the Malayan tiger would seem not to take to this form of diet so readily as its Indian brother, possibly because game is more easily procured.

Of the leopard (*F. pardus* ; *rimau kumbang*, Malay) two varieties, often considered distinct species, though actually they may occur in one litter, are numerous throughout the Peninsula. That known as the black panther is the commonest, the lighter spotted leopard, which in India outnumbers the black, being comparatively rare.

A much rarer animal is the clouded leopard or tiger (*F. nebulosa* ; *rimau dahan*, Malay), which is smaller and greyer and has spots very much larger and less regular and defined. It is believed to live almost entirely in trees. It is commonest in Negri Sembilan. It is found in Nepal, in Sumatra and in Borneo.

Besides these species, all over 5 feet in total length, there are four or five smaller forms of wild cat, which live in the jungle depths.

The commonest (*F. temmincki*; *rimau anjing* or "dog-cat") is about the size of a setter and of a beautiful golden colour above, paler beneath, with ill-defined spots. Another (*F. marmorata*) somewhat resembles the European wild cat but has a longer tail. Another (*F. planiceps*) has a bob-tail and a very flat head, and is possibly the species from which the Siamese domestic cat is descended. Another (*F. bengalensis*) is like a miniature leopard, but has a relatively shorter tail. All when captured even as kittens are savage and intractable and seldom live.

The *Viverridæ* or civets (*musang*, Malay) are well represented. The common palm-civet (*Paradoxurus hermaphroditus*) is a denizen both of town and country districts and often lives in roofs. Civets are distinguished from true cats by the more elongate head, by an erectile mane and by the strong odour of most of them. The most striking and aberrant species is the *binturong* or bear-cat (*Arctictis binturong*), an animal about 4 feet long from nose to tip of tail. Its fur is long, black and shaggy, sometimes with white tips to the hairs; the ears are tufted like those of a lynx, and the tail is prehensile. Captured young, it makes an amusing pet.

Two or three species of mongoose and as many weasels are found, but they are unknown even to most Malays.

The only representative of the dog tribe is the *srigala* or *anjing hutan* (*Cyon rutilans*), which is closely allied to the dhole or red hunting dog of India. In the north of the Peninsula, in Upper Perak and Pahang, this dog is not uncommon, but in more settled districts very scarce. It is a handsome animal, foxy red in hue with a bushy tail, black sometimes at the tip, sometimes entirely. It hunts in packs of five or six up to forty individuals, and creates havoc among goats, cattle and even, it is said, buffaloes. Malays consider it unlucky to meet a pack: disaster is inevitable within the year should the dogs give tongue without their being forestalled in the act by those who are so unfortunate as to meet them. The same superstition prevails about the urine of the *srigala* as that held by the Ghonds about the dhole—namely, that it causes blindness, and that the dogs purposely urinate against tree-trunks on which their prey is likely to rub, and among bushes and long grass through which it may pass.

Several forms of otter (*běrang-běrang*, Malay) are found, sometimes inhabiting mangrove swamps and swimming some distance out to sea. They closely resemble the English otter.

The little Malay bear (*Helarctos malayanus*; *běruang*, Malay)

seldom exceeds a hundredweight in weight, but though the smallest of its tribe it can maul a man badly.

The UNGULATES or hoofed animals include most big game, and in these Malaya is remarkably rich. The elephant (*gajah*, Malay) has occurred until quite recently in every part of the Peninsula, except the islands of Singapore and Penang. Of late years the Asiatic elephant has been divided into many local races, and the Malay form has not escaped receiving a name (*Elephas maximus hirsutus*) from a peculiarity, probably pathological, in a baby sent home from Negri Sembilan. Larger than animals from Sumatra



ELEPHANT ON YOUNG RUBBER ESTATE.

and Ceylon, elephants from Malaya do not apparently attain the size of big Indian males, and the weight of tusks rarely exceeds 90 pounds the pair, while in India it reaches 160 pounds. Only in old Malacca and in Perak has the elephant been domesticated. In Kinta and Upper Perak elephants are used for transport. The art of taming them has probably been learnt from the Siamese.

Two species of rhinoceros (*badak*, Malay) are found. One, the Asiatic two-horned rhinoceros (*Rh. sumatrensis*), is common from the swamps of the coast to the tops of the mountains, where it makes convenient tracks along the ridges. At one time the export of living specimens formed a regular industry in the Dindings. Horn,

hide and indeed every portion of its anatomy are prized by Chinese for medicinal purposes, and the rhinoceros, where not protected, has been much persecuted. Infinitely rarer, probably indeed verging on extinction all over its range, which extends from Assam and Burma to Siam, Sumatra and Java, is the one-horned rhinoceros (*Rh. sondaicus*), which can be distinguished by its larger size, its tessellated hide and the heavy folds of skin at neck, shoulder and hip.

The Malayan tapir, that strange parti-coloured beast, a relic of Miocene times, is comparatively common, though of shy, secluded habits. It frequents moist places, the beds of small streams and the



TWO-HORNED RHINOCEROS.

like. Sometimes it visits rubber estates and even penetrates beneath Malay houses. It is readily tamed, but requires care in feeding.

Pigs of three forms are numerous and do much damage. Often they attain a considerable size, though the Malay pig is never so large or powerful as its congener inhabiting Borneo and Sumatra and the Riau-Lingga Archipelago. The Langkawi Islands possess a peculiar dwarfed race, allied to the small pig (*Sus jubatus*) of the Mergui Archipelago on the Tenasserim border.

The Malay bison or gaur (*Bos gaurus hubbacki*; *sēladang*, Malay) differs in some small particulars from the typical animal of India. Once common nearly all over the Peninsula, the *sēladang* is now

almost extinct in Selangor. It is still fairly common in parts of Pahang, less so but still numerous in certain districts of Negri Sembilan and Perak. It occurs in Johore but not in the Colony. It affects districts where there are areas of partially open country or grassland and bamboo jungle. A second species of wild ox, the Banting or Tsain (*B. sondaicus*; *sapi*, Malay), almost certainly occurs in Siamese territory south of the Isthmus of Kra, though definite records are lacking. The animal may be distinguished from the *sēladang* by the different shape of the horns and by having the dorsal ridge less developed, and the legs and a large patch on the buttocks whitish.



A SĒLADANG.

Of the true deer, the Indian Sambar is represented by a slightly smaller race (*Cervus unicolor equinus*; *rusa*, Malay), which occurs nearly everywhere where it has not been killed out, even on the island of Singapore, but apparently not in Penang. Barking deer (*Cervulus muntjac*; *kijang*, Malay) are almost as abundant but more local.

A group characteristically Malayan, though occurring also in India and Africa, are the mouse-deer (*Tragulidae*). They are not closely related to the true deer and belong to a very primitive stock. They are small animals with very slender limbs and elevated rumps, and with elongated tusks in the upper jaw of the males.

Two species are found—*Tragulus kanchil* (*pelandok*, Malay), which is smaller and brighter coloured, and *T. napu*, which is larger and duller coloured. The *napu* is the scarcer, living in the more swampy areas. In Malayan folklore the mouse-deer occupies the position of Brer Rabbit in American Negro tales.

On nearly all the high ranges and on the isolated, precipitous limestone hills, which are a feature of the northern and central parts of the Peninsula, the serow (*Capricornis sumatrensis*; *kambing goa*, *kambing gurun*, Malay) is common, but owing to the nature of his habitat seldom shot. The Peninsular forms are closely related to, if not identical with, the race inhabiting Sumatra.

As in many other parts of the world, the RODENTIA or gnawing animals are the most numerous of the mammals. Flying squirrels are largely represented, and range from the big red flying squirrel (*Petaurista nitida*; *kubong*, Malay) as large as a cat (often to be seen at dusk at the edge of a jungle clearing parachuting from the top of one tree to the foot of another), to a little grey animal with distichous tail not so large as a rat (*Petaurillus kinlochii*). The other squirrels (*tupai*, Malay) are even more numerous, and differ largely in size, colour and habits. Some genera, *Menetes*, *Lariscus* and *Rhinosciurus*, are mainly terrestrial and as such are of more sober colour. The other genera are arboreal, of which some such as *Sciurus tenuis* are dull coloured, while some, such as *S. prevostii*, which is black, ivory white and orange red, are amongst the most brilliantly coloured of mammals.

Rats are nearly as numerous as squirrels. At Singapore and Penang the Norway or brown rat (*Mus decumanus*) and bandicoot rats (*Gunomy sp.*) have been introduced by shipping from Europe and India, but as yet are almost unknown on the mainland. Throughout the Peninsula, in mining centres and the larger towns, a grey-bellied form (*M. griseiventer*) is found, probably introduced recently by the Chinese. Widely spread in town and country districts are forms of *M. rattus*, which again have been introduced by human agency. The house mouse (*M. musculus*) also has been imported. The numerous indigenous forms are all animals with spiny pelage and as a rule pure white under-surfaces.

Three species of porcupine are found: the large short-tailed (*Acanthion brachyurum*), the long-tailed (*Atherurus macrourus*) and the porcupine rat (*Trichys lipura*). A species of bamboo rat (*Rhizomys sumatrensis*) is common in bamboo jungle, short, thick-set, rather smaller than a rabbit, with silvery body, a short

naked tail and reddish cheeks. It is a burrowing animal and can eat its way quickly through a tin-lined box.

INSECTIVORA are few, the most numerous being two species of tree-shrew (*Tupaia*), small squirrel-like animals of semidiurnal and arboreal habits. Much rarer is the pentailed tree-shrew (*Ptilocercus lowi continentis*), a small animal of nocturnal habits: its tail is scaled like a rat and naked except at the tip, which has long hairs on each side. Two animals allied to European hedgehogs are found. One is an evil-smelling beast, long, with scanty black and white hairy pelage and naked tail (*Gymnura gymnura*; *tikus bulan*, Malay). The other (*Hylomys suillus*) is a soft-furred animal about as large as a mouse, with a short, rudimentary, naked tail.

Another genus represented by several species is *Crociodura*, small animals with thick tapering tails and usually with grey or black velvety fur. One is common in houses and known to Europeans as the musk-shrew (*Crociodura caerulea*; *chēnchurut*, Malay): probably it has been introduced from India.

The most aberrant member of the Order is the flying lemur (*Galeopterus peninsulæ*; *kubin*, Malay), a nocturnal animal about the size of a cat with soft, silvery, greyish or reddish fur, flecked with white and a prehensile tail, enclosed in a flying membrane. It has curious comb-like front teeth, whose use is not yet understood, and a green microscopic alga, which can be washed off with spirit, grows on its fur as on that of the American sloth.

Of the Order of bats (CHIROPTERA) over sixty Malayan species occur. The giant fruit bat (*Pteropus vampyrus malaccensis*; *kěluang*, Malay), almost the largest of its Order with a spread of wings of more than 4 feet 6 inches, roosts in the mangroves in countless thousands, flying to the mainland to feed on fruit orchards. Many smaller species of fruit bat are found. Leaf-nosed bats live in great numbers in the limestone caves. One peculiar species, common in Singapore, is the naked bat (*Cheiromeles torquatus*), which appears only at dusk, flying with extreme swiftiness and directness. Other notable forms are the black-bearded bat common on the coast, and a black species, *Emballonura peninsulæ*, almost the smallest of the Order.

SIRENIA.—The duyong (*Halcore dugong*) is not rare in certain localities, notably near Singapore, on the east coast of Johore and on the coast of Negri Sembilan. In the Riau Archipelago cigarette-holders are made out of its canine teeth, while all Malays regard its tears as an infallible love-charm.

CETACEA.—The sperm-whale (*Physeter macrocephalus*) is found, and a few specimens of the lesser Indian fin whale have been stranded on the coast of Siam and in the Straits of Malacca. Several species of dolphin occur, including a milk-white one with pink fins (*Sotalia sinensis*) and a leaden-coloured one (*Steno plumbeus*). The larger Indian porpoise (*Orcella brevirostris*) is common and so is the Indian black fish (*Globicephalus indicus*).

EDENTATA.—The Malay pangolin, commonly called the armadillo by Europeans (*Manis javanica*; *tenggiling*, Malay), is fairly common though local, and is accounted a delicacy by certain castes of Tamils. Its scales are used in medicine by the Chinese.

BIRDS.

About six hundred and fifty species of birds occur, many more than those found in Sumatra and Borneo, though both those islands have more than double the area and a much greater range of altitude. The Malay Peninsula, unlike Borneo, possesses hardly any forms markedly distinct from those of surrounding areas, but its richness in birds is largely accounted for by geographical position, the fauna, though mainly Malayan, having been supplemented by species derived from the larger continental land masses to the north. The mountains, it is true, are inhabited by species that are mostly unknown in the lowlands and often do not occur elsewhere, but these are almost all closely allied to birds found in the adjacent Malayan islands or in the mountain ranges of Nepal, Tenasserim and Indo-China.

Of the sixteen species of game-birds (*Galliformes*) found in Malaya the most familiar are the jungle fowl (*Gallus gallus*; *ayam hutan* or *dénak*, Malay), which is believed to be the ancestor of all domestic poultry, and two species of quail usually found in grass-covered areas. The bustard quail (*puyoh*, Malay) is a favourite cage bird. Peafowl are common on the east coast, mainly near great rivers. The common argus pheasant (*kuang*, Malay) is found in virgin jungle throughout the Peninsula, but not in the islands of Penang or Singapore. Several species of wood partridge occur, the best known being a small black and green bird with erect crest of red hair-like feathers (*Rollulus roulroul*; *siul*, Malay). The long-billed partridge (*Rhizothera longirostris*; *sělantin*, Malay), rather like an exaggerated English partridge, is common in bamboo jungle and nocturnal in its habits.

Of some twenty-four species of pigeons and doves (*Columbiformes*)

eight are green pigeons (*Genera Butreron, Osmotreron, Treron; punai*, Malay), most of which are common all over Southern Asia. They give excellent sport, and large bags are often made. Allied to these is the white-breasted fruit dove (*Ptilinopus jambu; punai gading*, Malay), remarkable for its magenta cap and rose-pink breast patch on ivory-white underside. Of the three large imperial pigeons (*Carpophaga spp.; përgam*, Malay), only one (*C. ænea*) with wing and tail of coppery bronze is common; it is larger than the English wood-pigeon, flies fast and high, and affords good sport. On islands and among mangrove swamps the nutmeg pigeon (*Myristicivora bicolor; rawa*, Malay), noticeable for its creamy-white plumage and black wings and tail, is found in large flocks. A rarer bird is the Nicobar pigeon (*Calœnas nicobarica*), remarkable for its dark bronze-green metallic plumage, with long narrow hackles on the nape and back. Among the doves two are very common and favourite cage birds: the barred ground-dove (*Geopelia stricta*), familiar in all gardens, and the chequered-necked turtle-dove (*Streptopelia tigrina*), an inhabitant of rice-fields and open country.

The rails and coots (RALLIFORMES) comprise twelve species. Forms closely allied to the common English water-rail and moorhen are found, and purple gallinules also, though rarely. The commonest of the group is the white-breasted water-hen (*Amaurornis phœnicura; ayam-ayam*, Malay), a greyish black and white bird with long greenish-grey bill with a red base; it walks alongside almost every water-course and in every swamp, and sometimes penetrates to gardens. Banded crakes (*Rallina sp.*) are common, but are largely migratory visitors.

About sixteen species of terns (LARIFORMES; *chamar*, Malay) mostly migrants from more northern climes, have been recorded and several species are resident. One small species (*Sternula sinensis*) breeds on sandbanks far up the rivers of the east coast, and others nest on rocky islands in the Tioman Archipelago. No true gull is found.

Nearly fifty species of the CHARADRIIFORMES are found, and representatives of almost all the common European shore birds frequent the coasts in the winter, especially on the west, where the wide mud flats suit their habits. Curlew, whimbrel, redshank, greenshank, sandpipers of various species are common, while turnstones, grey plover and godwits are sometimes seen. On more sandy shores various races of ringed plover are numerous, one species breeding locally. The golden plover also occurs. A resident bird is the black-necked wattled plover (*Sarcogrammus atrinuchalis*) known

to Malays as the "ask-a-penny bird" from its peewit-like call. Besides the so-called painted snipe (*Rostratula capensis*), which is not really a snipe at all, three species are found: the common pintailed snipe, the European snipe, which is much rarer but still relatively common, and the Chinese snipe (*Gallinago megala*), a larger and heavier bird, which is very scarce. A solitary woodcock has been shot.

Several species of cranes, ibises and storks occur, but all except the lesser adjutant (*Leptoptilus javanicus*; *burong babi*), an inhabitant of the mangrove swamps, are rare. The adjutant bird is readily domesticated, but is apt to gobble up young chickens with amusing nonchalance.

Hérons and bitterns (ARDEIDÆ) are fairly numerous. The cattle egret (*Bubulcus coromandus*; *bangau*) is found attendant on buffaloes in the rice-fields. Those species that yield "aigrettes" are rare. Both the European bittern and a modified form of the common heron are found, but the former is rare; it has been shot in Malacca and in Singapore Island.

Members of the duck tribe (ANSERIFORMES) are curiously rare, and, though seven or eight species are on our list, only the tree duck (*Dendrocygna javanica*; *bélibis*, Malay) and the cotton teal (*Nettion coromandelianus*) are likely to be met. The former, a sober-coloured bird of various shades of brown, is fairly numerous in parts of Pahang and Perak, but commoner towards the north; the latter, a much smaller bird with a goose-like bill with white plumage below and dull metallic greenish above, is known from Pahang, Perak, the Bernam river in Selangor, and Singapore.

The STEGANOPODES include the cormorants, gannets, frigate and tropic birds and darters and the pelicans. All are represented, but none common except perhaps the gannet (*Sulasula*; *itek laut*, Malay), a chocolate-brown bird with white present.

About forty species of the ACCIPITRIFORMES are known, but only a few that frequent the coast and open country are often seen. The king vulture (*Optogyps calvus*) is a handsome bird, black in plumage, with a white neck ruff and the legs and bare skin of the head and neck a brilliant red. The other two Malayan varieties are dingy brown. Vultures are hardly, if ever, seen much south of Penang, and very seldom there, probably owing to improved sanitation in British Malaya; but in the Siamese States north of Penang on the west coast and as far south as Trengganu on the east coast they abound.

Eagles and hawks are very numerous in species, but not many

varieties are common. Three species, the Brahminy kite, the large grey and white fishing eagle and the osprey, may be seen at every fishing village. The osprey is practically identical with the form that is so great a rarity in the British Isles; the Malays call it the oyster hawk (*lang siput*), saying that at the turn of the tide it flies up the estuaries uttering its long-drawn scream to warn shell-fish of the return of the water. Other fairly common hawks are the little sparrow-hawk (*Accipiter gularis*; *rajawali*, Malay), which ravages native poultry-yards, and the large serpent eagle (*Spilornis*), of handsome ash-brown plumage variegated with white and a long black crest, which feeds mainly on fresh-water crabs, lizards, small fish and rats. The smallest known bird of prey is the black and white falconet or "grasshopper hawk" (*lang bilalang*), which, though considerably less in bulk than the thrush, will attack and kill birds more than twice its weight.

The honey buzzards (*Pernis spp.*) are represented by two species very similar in appearance and habit to the British bird, and peregrine falcons also occur during the winter months. The bat hawk (*Machæramphus alcinus*) is known as yet only in three or four localities, usually near limestone caves. It is crepuscular in habits in accordance with the bats on which it preys.

Nearly twenty kinds of owls (STRIGIFORMES) are on record but none common. The big eagle owl (*Huhua orientalis*) is found in the jungle; the striped fishing owl (*Ketupa ketupa*) lives on the frogs, rats, crabs and small fish of rice-flats; the plaintive hoot of the little horned owl (*Pisorchina lempiji*) is often heard on moonlight nights, and the hawk owl (*Ninox spp.*), a species partially migratory and common only in the winter months, is the *burong punggok* of Malayan folktales, the type of unrequited love.

Of parrots there are very few species—two long-tailed birds (*Palæornis*; *bayan*, Malay), which are fairly abundant in the south, and two lorikeets, small green, blue and scarlet birds (*Loriculus spp.*; *sērindit*, Malay), much in favour among Malays as cage birds. Cockatoos are not found.

Belonging to the family of frogmouths (PODARGIDÆ) are three local birds of nocturnal habits, which resemble in soft moth-like plumage the owls and nightjars. They are allied to the Australian morepork. They build extraordinary nests, mere pads of cotton-like fibre little larger than a dollar, on which it would seem impossible for the bird to balance itself, let alone incubate its eggs.

Of rollers (CORACIDÆ) the only Malayan species (*Eurystomus*

orientalis; *tiong batu*, Malay) is rather larger than a thrush, with plumage of varied shades of blue and dull brownish green and a brilliant red beak. It is common in jungle clearings, nesting in the holes of lofty dead trees.

Sixteen kingfishers (ALCEDINIDÆ) inhabit Malaya. Some are never found far from salt water; others frequent rice-fields and jungle streams, while others, again, live in the forests often far from water and do not feed on fish. The most familiar species is a small bird (*Alcedo bengalensis*) almost identical with the English kingfisher and a larger bird (*Halcyon smyrnensis*) with brilliant coral beak, azure-blue upper surface, and chocolate and white breast. On the coast a plain blue and white bird (*H. chloris humii*) is the dominant form. By Malays all kingfishers are called "kings of the prawns" (*raja udang*) in allusion to their principal food.

The hornbills (BUCEROTIDÆ) are perhaps the most characteristic family of Malayan birds. Eleven species occur, of varied size, but all distinguished by bizarre development of the bill. They inhabit all kinds of country from the highest hills to the plains and mangrove swamps. The largest (*Rhinoplax vigil*; *tëbang mëntua*, Malay) is provided with a heavy pick-like bill having a solid plate of dense bony tissue in front. Another weird species is the rhinoceros hornbill, which looks as if it possesses two bills, one superimposed on the other. Hornbills are capable of long-sustained though laboured flight, and can be heard from great distances owing to the sound of the air rushing through the unfeathered bases of the primary quills.

Three bee-eaters (MEROPIDÆ; *berek-berek*, Malay) are found in open country, and are green birds with varied tints of brown or chestnut on the head and elongated central tail feathers. Another, a larger bird, a denizen of open forest, is green with a ruff of lengthened vermilion feathers on the breast.

Goatsuckers (CAPRIMULGIDÆ) are unpopular birds. Of the four Peninsular species, the commonest is familiar from its habit of squatting on the roads at dusk and rising suddenly from under one's feet, while its constantly reiterated note, *tunk-tunk*, on moonlight nights is also a source of irritation. A larger jungle species (*Lyncornis temmincki*; *tiptibau*, Malay) with a rather musical note is well known.

There are about fifteen species of swifts (APIDÆ). Some (*Chaetura*), large blackish-brown birds, with curious needle-like points terminating their stiff tail-feathers, have the fastest flight of any known

creature; they are usually seen in towns only after heavy rain, but are common in mountain passes. Others (*Apus spp.*) are similar to the European swifts, nesting under the eaves of houses. Others, again (*Collocalia spp.*), smaller birds, nest in caves or sea-cliffs; they supply the famous Chinese delicacy, bird's-nest soup, the nests being composed of a salivary secretion.

The trogons (*burong kēsumba*, Malay) are now mainly a neotropical family. They are represented in the Indian region by two genera, one of which with six species occurs in Malaya. They are silent sluggish birds, in size varying from that of a thrush to a pigeon. The plumage is dense and soft, and is in males always of vivid scarlet pink or orange beneath, with the upper surface of varying tints of russet and black. The females are duller-coloured.

Nearly thirty species of cuckoo occur and are of very varied aspect; some are migratory species found here only in the winter months, while others are resident. Amongst the former may be mentioned the hawk cuckoos (*Hierococcyx spp.*), the true cuckoos (*Cuculus spp.*), amongst which is a form almost identical with the English bird, the Indian koel (*Eudynamis honoratus*), most abundant on the coast and on small islands in the Straits, and the brain-fever bird (*Cacomantis merulinis*), so called from its irritating note, some forms of which are resident. Amongst the permanent inhabitants, most familiar are the crow-pheasants (*Cantropus spp.*; *bubut*, Malay), clumsy birds of russet and black plumage, mainly inhabitants of grass land and often to be seen along railway lines. Rarer are the bronze cuckoos, small birds only slightly larger than a sparrow with the upper surface a brilliant metallic emerald-green or violet.

Though occurring also in Africa and South America, the family of barbets (CAPITONIDÆ) is amongst the most characteristic of Oriental birds. The Malayan species are varied in appearance, most green with gaudy colours about the head and neck, but one a dingy brown (*Calorhamphus*). Most are forest birds, but two are denizens of orchards, one (*Zantholæma hæmatocephala*) well known to the Malays as the "blacksmith" (*tukang bēsi*) from its ringing bell-like note, and not found far south of Taiping in Perak.

Woodpeckers (PICIDÆ; *bēlatok*, Malay) are numerous both in species and in individuals, over thirty forms being known. They range from a big grey bird, (*Alophonerpes pulverulentus*) larger than a rook to a tiny green bird (*Sasia everetti*) little larger than a

wren. They inhabit all types of country from the mangroves and casuarina belts of the coast to the tops of the highest mountains.

The broadbills (EURYLÆMIFORMES) are exclusively an Oriental group. In Malayan jungle there are seven species ranging from a small emerald green and black bird (*Calyptromena viridis*) to a slightly larger black and red bird with a gorgeously coloured blue and yellow bill (*Cymborhynchus malaccensis*). Their nests consist of untidy globular masses of dead leaves and debris attached to a creeper or aerial root over hanging water.

Of the great Order of perching birds (PASSERIFORMES) there are over three hundred local species.

The ground thrushes (PITTIDÆ; *burong lah*, *b. pachat*, Malay) are forest-haunting birds with poor powers of flight, though certain species are often captured at lighthouses and on board vessels in the Straits of Malacca. The seven local species are all brilliantly coloured, about the size of a thrush, but with relatively long legs and very short tails.

The Eastern form of the European house swallow spends the winter in Malaya, while there are also a small resident form (*Hirundo javanica*) and a large and handsome black and chestnut species (*H. badia*), peculiar to Malaya, but found only near limestone hills.

Over forty species of the fly-catchers (MUSCICAPIDÆ) occur. Several are only winter visitors, but most are resident. The most familiar are the fantail fly-catchers (*Rhipidura* spp.; *mērbau gila*, Malay). Others are the blue and orange birds of the genus *Cyornis*, but the most striking of the group are the long-tailed, crested, paradise fly-catchers (*Terpsiphone* spp.), small birds which in their adult stage are black and white with a glossy black crest and an enormously elongated white tail. The species are very variable in plumage, and in the immature birds have the white replaced by rich chestnut. Sometimes they are mistaken for birds of paradise, which are strictly Papuan birds and do not occur in Malaya.

There are about eleven species of cuckoo-shrikes (CAMPOPHAGIDÆ). Some are grey, black and white birds, one of which (*Lalage minor*), rather smaller than a thrush, is seen on lawns during the winter months. Others are the minivets (*Pericrocotus*), most of which are birds of brilliant black and scarlet plumage, the scarlet in the females replaced by yellow. A plain grey and black form is a winter visitor from China.

Nearly forty species of bulbuls (PYCNONOTIDÆ) occur in all types of country. The biggest only slightly exceeds a thrush in size. The *barau-barau* (*Trachycomus ochrocephalus*), a green and grey bird with a bronzy yellow head, is found mainly along river banks; it is a favourite cage bird amongst the Malays and a sweet songster. Others are the yellow-vented bulbul, a very common garden bird, the green bulbuls of the jungle (*Chloropsis spp.*) and the fairy blue birds, azure-blue above and glossy black beneath, rather larger than starlings, which love jungle fig trees in fruit.

There are over fifty species of babblers (TIMELIIDÆ). Almost all inhabit dense jungle and many are confined to the higher mountains. The most striking species perhaps are the whistling thrushes (*Myophonus spp.*), which have dark blue feathers with glistening edges. They are found along the banks of mountain streams and on the limestone hills, feeding on snails whose shells they crack on some one rock, accumulating quite large piles of debris.

Wrens (TROGLODYTIDÆ) are represented by one mountain species (*Pnæpyga lepida*).

There are about twenty species of thrushes (TURDIDÆ), several only seasonal visitors. The Straits robin or dial bird (*Copsychus musicus*), a black and white bird with a sweet song, about the size of a thrush, is an inhabitant of every garden; the Indian shama (*Kittlocincla macrura*; *murai batu*, Malay), also a sweet songster, is numerous in rocky jungle and on many of the coastal islands. Mountain streams harbour several species of fork-tail (*Henicurus* and *Hydrocihla*), birds black, white and chestnut in colour, with the habit of a dipper or ring-ouzel and a shrill acidulated call. Certain chats also are found.

Of warblers (SYLVIIDÆ) there are some twenty, but except for the tailor-birds and one or two *Cisticola* found in *lalang* lands they are only winter visitors.

A typical tit (*Parus cinereus malayorum*) is confined to the mangrove zone, while a large black and yellow crested form (*Melanochlora flavocristata*) is common in flocks in submontane forests.

The large jungle crow is common on the coast. The slender-billed crow (*Corvus enca compiler*) is sparingly distributed in jungle country at low elevations. In the mountains a beautiful blue and red hunting crow (*Cissa robinsoni*) is locally distributed. A black jay-like form with a stiff crest (*Platysmurus leucopterus*) and a glossy magpie (*Crypsirhina varians*) are found only in the more northerly districts,

There are about seven species of drongoes or king-crows (DICRU-
RIDÆ), black or grey birds usually with spangled plumage and in
some species with peculiar elongated outer tail-feathers, ending in
racket-shaped or oar-shaped expansions. They are numerous
everywhere, especially in bamboo jungle.

A black and red species of oriole is found in the mountains, and
three black and yellow forms, one largely migratory, in the low-
lands.

The starlings (STURNIDÆ) include about twelve forms. The hill
mynahs (*Eulabes* sp.; *tiong mas*, Malay), glossy black birds with
orange bills and feet and chrome-lemon yellow facial lappets, are
common cage birds and soon learn to talk. The metallic starling
(*Calornis chalybea*), a violet black bird with greenish reflections and
a vermilion iris, is numerous round buildings. The crested mynah
(*Æthiopsar fuscus*; *burong gembala kərbau*, Malay) is seen in rice-
fields in the north of the Peninsula attendant on cattle, together
with the paddy bird (*Bubulcus coromandus*).

Of weaver-birds (PLOCEIDÆ) there are about a dozen forms,
including the introduced Java sparrow, the true weaver-bird, and
several species of munia, which damage ripening rice-crops.

The finch family (FRINGILLIDÆ) is hardly represented. There
are only a form of the tree-sparrow (*Passer montanus*) probably
introduced, a bullfinch (*Pyrrhila waterstradti*), found only on the
tops of the highest mountains, and a bunting (*Emberiza aureola*),
a winter visitor to the north of the Peninsula.

Several wagtails (MOTACILLIDÆ) and pipits visit the Peninsula
during the winter months. One species is a resident and is
common in gardens and rice stubble.

Of the beautiful little sun-birds (NECTARINIIDÆ), the analogues
of the humming birds of the west, over twenty species are found,
which may be divided into sun-birds proper, always with metallic
feathering in the male, and the larger spider-hunters, with plain
plumage mainly green and yellow. The commonest of the first
section (*Anthothreptes malaccensis*) may be seen in every coconut
plam. Other beautiful forms occur on high mountains and on the
sea-coast.

The flower-peckers (DICÆIDÆ) live on high trees. A bird
common among shrubs on sandy sea shores is *Dicaeum cruentatio*
(*burong sėpah putėri*, Malay), which is red and black above and
creamy white beneath.

The white eyes (ZOSTEROPIDÆ), a group allied to the above two

groups, are small birds of greenish-yellow plumage, with a conspicuous ring of silky-white feathers around the eye. One form is almost confined to the coast, while others frequent high mountains.

REPTILES AND AMPHIBIA.

CROCODILES (ENYDOSAURIA).—Three species of crocodiles are found, of which one, the marsh crocodile (*Crocodilus palustris*), is very rare, and indeed of somewhat doubtful occurrence except in the Siamese States. Another, the Malayan gavial (*Tomistoma schlegeli*), can be recognised by its long and narrow snout, and hitherto has been met only in the Perak, Pahang and Selangor rivers and their tributaries. The gavial is said to feed entirely on fish. The largest specimen recorded locally is about 13 feet in length, but in Borneo and Sumatra much larger have been procured. The third species, the estuarine crocodile (*C. porosus*), is more abundant on the west than on the east coast, owing probably to the mangrove swamps. Specimens over 24 feet long have been captured in the Peninsula, while from other parts of its range individuals of over 30 feet are on record. Though commoner within tidal influence, this crocodile ascends far upstream, and sometimes reaches mining ponds that have no connection with any river. It has also been seen thirty miles from land, in the Straits of Malacca. Probably it kills more men in the Peninsula than even the tiger. The Malays recognise many varieties, which, however, are based on differences in colour, due merely to age. Very old crocodiles of a dingy grey or greyish-brown, frequently due to a growth of alga on the scales, are usually regarded as sacred.

TURTLES AND TORTOISES (CHELONIA).—Of turtles and tortoises twenty-three species are recorded. The largest, the luth or leathery turtle (*Dermochelys coriacea*), is occasionally found in the Straits of Malacca: it attains a total length of 8 or 9 feet and a weight that may approximate to three-quarters of a ton; it produces nothing of commercial value. Far commoner are the green or edible turtle (*Chelone mydas*) and the hawksbill turtle (*C. imbricata*). The former abounds on both coasts, and lays its eggs on the sandy shores of small islands or on lonely beaches on the mainland. In the Native States the privilege of collecting eggs during the laying season is a prerogative of the ruler. The eggs are a favourite delicacy with natives and command a high price. The flesh of the hawksbill turtle is inedible, nor are its eggs much prized. However,

this turtle provides most of the tortoise-shell of commerce; much passes through Singapore, though little is collected locally. Another species, the logger-head, is found in the Straits of Malacca: it has a very large head and strongly hooked beak, in which respect it resembles the hawksbill. All three of these marine varieties attain about 4 feet in length of carapace.

The soft turtles (*TRIONYCHIDÆ*) mainly inhabit rivers. The head and limbs are large and powerful, and can be completely retracted within the carapace, which is devoid of horny shields and is leathery in texture. They are savage and can inflict dangerous bites with their powerful jaws, the structure of the bones of the neck enabling them to dart out the head with great rapidity. The flesh is much eaten by Chinese and Tamils. About five species occur locally, with only technical differences. The largest specimens are about 3 feet across the back. The remaining fourteen tortoises of the Peninsula are known as land tortoises (*TESTUDINIDÆ*), though some are almost as fluviatile in habit as the soft tortoises. All have a hard and bony carapace, into which the head and limbs can be retracted. In some species the lower portion of the carapace is hinged, so that when alarmed the animal is completely enclosed and quite impervious to attack; these box-tortoises (*Cyclemys*) are not uncommon in marshes. Three species of large tortoises that attain a length of 20 inches and more are confounded by the Malays under the name *tuntong*. The *tuntong* lays its eggs in sandbanks by the side of the larger rivers, and hunting for these eggs is the prerogative of Malay royalty and an occasion for water picnics: the eggs are elongated and have a hard shell, and are not round and leathery like those of the edible turtle.

Over seventy-five species of lizards are known, but most are rare and local, or present only minute differences. Several varieties of geckoes are common in houses, some introduced from other parts of the world. To Singapore a very large species, grey with small red spots and nearly a foot in length, has been brought from Bangkok; it is called the *tokay* from its note, and its presence in a house is supposed to bring good fortune. The flying gecko has a large but variable number of flaps of skin along each side of the tail, and the skin on the sides of the body flattened and extensible, so that the animal can parachute through the air and even rise slightly at the end of its course, though real flight is impossible. Several species of flying draco are found in the jungle, and one is common in the trunks of coco- and betel-nut palms. The ribs are extended

to support a lateral membrane that serves as a support when the reptile is gliding through the air, though, like the flying gecko, it cannot fly upwards. These flying lizards are generally a mottled grey and brown, but the throat is often ornamented by a scaled appendage, bright yellow, blue, scarlet, or maroon, according to species and sex. Other common lizards of the same group but without power of flight are several species of *Calotes*, incorrectly called chameleons by Europeans from their powers of colour change, but known to the Malays as " cursers " (*sumpah-sumpah*) from their habit of opening and shutting the mouth when angry or frightened. The commonest local species is in large specimens about 18 inches long and in colour a light emerald green, which changes almost to black when the animal is irritated or alarmed. Two species of the large monitor lizards (*Varanus*; *biawak*, Malay) are common, of which the biggest may attain a length of over 7 feet and be mistaken for small crocodiles by the inexperienced. They are incorrectly known as iguanas. One species is largely fluviatile in its habits, but the other is common round villages, and lives on carrion, garbage and offal. A very large proportion of the Peninsular lizards are included in the family of *Scincidae* or skinks (*běngkarong*, Malay). These are small and inconspicuous in their habits, being found among dry leaves, though some like basking in the sun, and the largest of the genus is met in houses. The species vary much in appearance, and particularly in the size of their limbs, which are often rudimentary or absent, so that the animal has a resemblance to a slow-worm or a snake. The sole representative (*Tachydromus sexlineatus*) of the family to which the common English lizard belongs has been found only in the north. It has a slender tail three or four times the length of head and body, and its total length is about 15 inches. It is called by the Malay the " lizard-like snake " (*ular běngkarong*) from its appearance, and inhabits fields of tall coarse grass (*lalang*), over the tops of which its attenuated body enables it to travel.

Over a hundred and thirty varieties of snakes occur. Only a few, however, are poisonous or harmful. The harmless burrowing snakes (TYPHLOPIDÆ) are almost entirely subterranean in their habits, and rarely exceed a foot in length. They are practically devoid of eyes, and their scales, which are small, smooth and shining, are alike all round the body, the ventral ones not differing from the others as in most snakes. The tail is very short and blunt, so that a Malay name for them is " the snake with

two heads." The next family is the Pythons (BOIDÆ), frequently but incorrectly termed boa-constrictors by Europeans. The only well-known species (*Python reticulatus* ; *ular sawa*) commits depredations among poultry and goats. It may attain a length of over 30 feet, while specimens of over 24 feet are quite common. Its gall-bladder is highly valued for medicine and magic and its flesh is eaten by some Chinese. It is not poisonous, but kills its prey by constriction, and it possesses formidable recurved teeth, which inflict dangerous and even fatal bites.

The family COLUBRIDÆ has been divided from peculiarities in the dentitions. The harmless *Aglypha*, whose teeth are all solid, contain most of the snakes of the Peninsula. *Acrochordus javanicus* is a curious form which lives chiefly on fresh-water fish. It is reddish-brown mottled with black; the length of full-grown specimens is about 5 feet, and the skin, which is uniform round the body, is granulated shagreened leather. The Malays call it *ular bēlalai gajah* from a fancied resemblance to an elephant's trunk. The snake is very thick, and its stumpy tail and flattened triangular-shaped head give it the appearance of a viper, though it is quite harmless. The local form of the *Coluber tanius* var. *ridleyi*, which is widely distributed throughout Asia, is paler and less mottled than specimens from other countries. They live in the limestone caves, feeding on bats. Large specimens attain a length of over 7 feet. Malays call them "moon-snakes" (*ular bulan*) and the Chinese venerate them as tutelary deities of the caves. Of *Opisthoglypha*, which have one or more of the teeth in the back of the jaw grooved and are possibly poisonous, about twenty-five species exist in the Peninsula. Some inhabit brackish water and seldom occur on dry land; the remainder are arboreal forms, often brilliantly coloured. The slender green whip snake (*Dryophis prasinus*) is about 5 feet long and of an emerald green with a vivid yellow line down each side, while in some individuals the edges of the neck scales are silvery turquoise blue; it lives in small bushes, with which its colouring harmonises so well as to make it difficult to detect. Another common but much larger snake of the group is *Dipsadomorphus dendrophilus* (*ular katam tēbu*, Malay). The body colour is a deep glossy black with a slight bluish cast, and with regular vertical bars of brilliant chrome yellow. Though not poisonous, it is very vicious and feeds on other snakes, small birds, eggs and slugs. Of the third section (*Proteroglypha*), all very poisonous, whose front upper teeth are grooved or perforated, over

thirty species are found in the Peninsula and adjacent seas. Some twenty-five are sea-snakes, to be distinguished from innocuous water-snakes by having a tail flattened like an oar. These snakes never leave salt water and are helpless on land. Though common in the Straits of Malacca, they abound more on the east coast, where they cause annually a certain loss of life amongst fishermen. A bite at the commencement of the north-east monsoon (November) is considered more serious than one at any other season. The poison appears to act slowly, and cases that terminate fatally often survive for three days or more. There is a small group that comprises the most poisonous Asiatic snakes, whose bite is almost invariably fatal within a few hours. Chief amongst these, and the largest of all poisonous snakes (attaining in well-authenticated instances a length of over 14 feet), is the king cobra, or hamadryad. This species, which is uncommon in the Peninsula, is reputed to be most ferocious and to attack human beings unprovoked. Old specimens are dull yellowish brown on the anterior two-thirds of the body, with the posterior third chequered with black. The under surface is much lighter, sometimes with a yellow throat, and the skin of the neck is dilated and can be erected into a hood when the snake is irritated. The principal food of the hamadryad is snakes, including cobras and other poisonous species, to whose venom it is probably immune. Commoner than the hamadryad is the cobra, which is almost as poisonous, though much smaller, rarely exceeding a length of 6 feet. Malay specimens, as a rule, lack the spectacle mark on the hood, which is seen on Indian ones, and are generally much darker, almost black, in colour: occasionally a brilliant turmeric yellow variety is found, and in certain districts in the north is the dominant form. The cobra affects all types of country except high mountains and mangrove swamps, but is perhaps commoner near towns and villages than in true jungle. Three species of "krait" are on record from the Peninsula, but only one, the banded "krait," is at all common. The bite of these snakes is almost as dangerous as that of the cobra, though slower in its effect. The common species, *Bungarus fasciatus*, has a superficial resemblance to a harmless species of *Dipsadomorphus*. Of the two remaining genera of Proteroglyphous snakes, represented in the Peninsula by four species, the only notable form is *Doliophis bivirgatus*, known to the Malays as the "sunbeam snake" (*ular sëndok mata-hari*). Its head and tail above and below are bright coral red, the under surface is the same colour, and the upper surface Oxford

blue, separated from the red of the lower parts by a narrow lateral line of pale blue. Its bite proves quickly fatal to small birds and mammals, and its poison glands are relatively larger than in any other species, actually displacing the heart from its normal position.

Of the viper family only one section, the pit-viper, is met. All are very poisonous, and even if the sufferer escapes death, serious constitutional disturbances are set up that may last for months. The pit-vipers may be recognised by their flat triangular head and sharply constricted neck, and by a deep pit between the nostril and the eye. Six species belonging to two genera occur and are widely spread. The genus *Ancistrodon*, which has been found only in the north (though its representative species, *A. rhodostoma*, is common in Siam and Java), can be distinguished from the other genus (*Lachesis*) by having large symmetrical shields instead of small scales covering its head. It is heavily built and sluggish, of mottled greyish brown, and frequents dead leaves in undergrowth. Together with several allied species it is called by Malays the *ular kapak daun*, or "leaf-axe snake," the word "axe" referring to the shape of the head. The species of the genus *Lachesis* are also thick-set snakes, usually with much green in the coloration, often varied with red, purple, yellow and black. *Lachesis wagleri* frequents the mangrove swamps, where it is much dreaded by Chinese woodcutters: it is green, mottled and starred with yellow and black, but no two specimens are alike in arrangement of pattern.

BATRACHIANS—FROGS AND TOADS.—About seventy species are recorded, though few are peculiar to the Peninsula. Of the family ENGYSTOMATIDÆ the most familiar is the "bull-frog" (*Callula pulchra*) introduced from India or Siam. Of toads the most familiar are the common bath-room toad (*Bufo melanosticta*) and a larger jungle species (*B. asper*) with very rough warty integument. About seven species of horned toads (PELOBATIDÆ) are known. They have leaf-like processes over the eyes. The commonest (*Megalophrys nasuta*) is called "horned frog" (*katak bertandok*) by Malays.

INVERTEBRATES.

Except Tropical America no region offers such a variety of butterflies as Malaysia. Great Britain, similar in area, has 60 odd species against some 800 in the Malay Peninsula. In addition to forms closely allied with those of Borneo and Sumatra, many Indian butterflies have reached the Peninsula, though not always the Archipelago.

Butterflies are not much in evidence. Certain species frequent jungle depths, others sunlit mountain streams; some are to be found only near mountain tops, others in gardens or grassland. In Malaya the two monsoons seem to have little effect on butterflies. In some species dry and wet season forms occur together; some appear to be on the wing all the year round and others to have two broods. The life histories of all but a few are unknown. Malayan butterflies illustrate well the methods of protective coloration. Take the well-known leaf-butterfly, *Kallima*. The upper side of the wings is blue brown crossed by an apical transverse orange bar; the under side like a dead leaf, complete with mid-rib and small spots seemingly of decoloration or fungus. When the leaf-butterfly alights with wings closed it becomes invisible. Again, Malayan butterflies offer abundant material for the study of mimicry. According to the Batesian theory, rare *Elymnias* species, probably palatable, gain protection by mimicking common distasteful Danaines. According to the Mullerian theory, several unpalatable species all adopt some one conspicuous warning pattern, and however unlike in structural features become indistinguishable in colour and pattern. Migrations of swarms of butterflies, such as the brown Nymphalines (*Cirrochroa* spp.), streaming for hours in one direction, have not yet been explained.

Among other common Nymphalines notable are the black and white barred *Neptis* species and the grey-lilac *Euthalia*. Probably more than 300 "Blues" occur. The *Papilionidæ* contain the "Whites" and the "Swallow tails," English names inapplicable to the splendid and varied species of the East. Among the "Swallow tails" are the well-known *Papilio brookeana*, a long narrow-winged butterfly velvet-black with green fern-like markings. The curious little long-tailed aberrant Papilios (*Leptocircus* spp.), when hovering over jungle pools, look like dragonflies. Some hundred or more swift-flying "Skippers" (*Hesperidæ*) are found. No doubt several new species of Malayan butterflies await discovery, especially among the *Lycænidæ* and *Hesperidæ*.

Alfred Russel Wallace has made Malaysia famous to all entomologists, especially for moths. The most striking is the great slow-flopping *Atlas* moth with reddish-brown wings relieved by large talc-like window panes. There are two species of Death's Head, both like the European species, the *Convolvulus* and the Silver-striped Hawk, so prized in Europe, and many species of Humming-bird Hawk moths. Several species of *Pyralidæ* harm crops.

Malaya is a paradise for the coleopterist. Over a hundred new species of *Staphylinidæ* were recently discovered on the island of Singapore. The beetles range from thousands of microscopic species to fearsome longicorns, stag beetles and coconut weevils. The brilliant green *Buprestidæ* and the little flat tortoise beetles (*Cassidæ*) shining with gold or silver elytra are arresting.

Some two hundred species of dragonflies are known already, but their life histories await study. There are about seventy cockroaches, mostly brown, but some green, yellow, or variegated. Stick and leaf insects (*Phasmidæ*) escape notice by resembling leaves and sticks, though flight often reveals brilliant red or green underwings. Of praying insects (*Mantidæ*), some are like fresh, some like dead leaves, while one (*Hymenopus bicornis*), in its younger stages, is coloured waxy white and pink exactly like an orchid. The long-horned and short-horned grasshoppers are well represented, but the locust seldom ravages Malaya. The deafening "stridulous telegraphy" of the males at nightfall calls attention to Malaya's eighty cicadas, which range from *Pomponia imperatoria*, 8½ inches across the wings, to dainty little coloured species of *Mogannia* and *Huechys*. Allied to them are the brightly coloured lantern-flies. In this Order are placed the stink bugs, so destructive to crops. Of flies the most interesting are mosquitoes, of which some one hundred species occur, a dozen belonging to the malaria-carrying genus *Anopheles*, that breed both in still and running water. The jungle floor is alive with ants, many, like the fire-ant, powerful biters. One of the commonest wasps is an orange-banded species (*Vespa cincta*). Among bees, the most conspicuous are the big carpenter bees (*Xylocopa spp.*), which burrow in rafters and make long galleries, often shared, it would seem, by a big red *Heteromerous* beetle.

CHAPTER VII

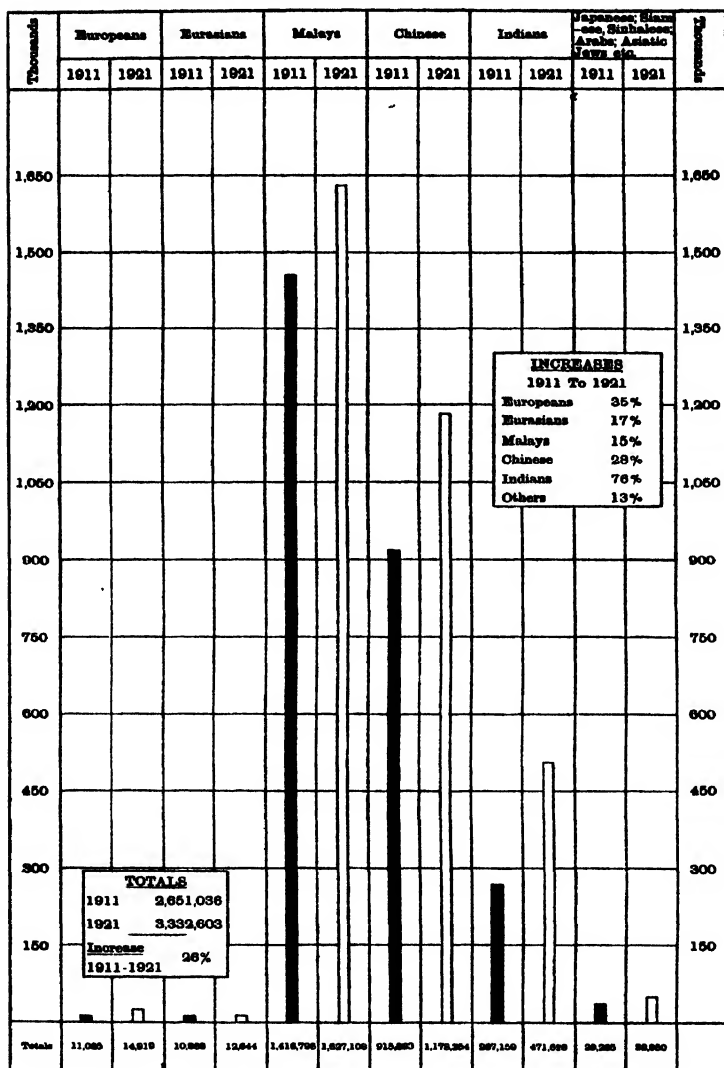
POPULATION

IN 1921 the total population of British Malaya (excluding Brunei) was 3,332,603. The table on p. 75 gives the figures for all nationalities on the three last occasions of the census.

In Singapore there are 1,383·2 persons to the square mile; in Pahang 10·4. "As regards density the Straits Settlements approximate to Holland, Perak and Negri Sembilan to Bulgaria, Selangor to Roumania, and Pahang to New Zealand. Johore is slightly more populous than Sweden, Kedah slightly less densely populated than China, while Kelantan and Trengganu approximate to Turkey and Soviet Russia respectively."

IMMIGRATION.—In British Malaya the main factor that governs increase in the population is not as in Europe excess of births over deaths but immigration. In the Straits Settlements, the Federated Malay States and Johore, which contain about three-quarters of the total population, deaths during the last decade have been largely in excess of births, and, were it not for the stream of immigrants from China and India and the islands of the Malay Archipelago, there would have been a decrease in the population instead of an increase of over 25 per cent. Of the population enumerated in 1921 just over 45 per cent. were immigrants. It has been first the Chinese and then the Indians who have produced the revenue that has built roads and railways and towns. In 1891 there were only 231,551 Malays in the Federated Malay States, or less than the population of its large estates to-day. If all foreigners were expelled from British Malaya and all the native-born returned to the State or settlement of their birth, conditions would be extraordinarily changed. Kelantan would have by far the largest population, and Kedah would be more populous than Perak. The population of Penang would exceed that of Singapore by 50 per cent; Selangor would contain fewer people than Pahang, and the population of Selangor and Negri Sembilan combined would be smaller than that of the Kinta district to-day. To induce immigrants to bring their

BRITISH PENINSULAR MALAYA
POPULATION, BY NATIONALITIES FOR 1911 AND 1921 CENSUS.



State or Settlement.	Europeans.			Eurasians.			Malaya.			Chinese.			Indians.			Others.*		
	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.
	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.
Singapore ..	3,824	5,803	6,231	4,120	4,712	5,451	36,080	46,952	58,520	164,041	222,655	317,491	17,823	27,990	32,456	2,667	3,873	5,763
Penang ..	1,160	1,262	1,476	1,945	1,774	1,919	106,000	114,441	110,382	98,424	111,738	135,288	38,051	46,565	53,339	2,627	2,223	1,931
Malacca ..	74	303	442	1,598	1,596	1,768	72,978	78,813	86,451	19,466	35,450	45,768	1,276	7,500	18,833	93	429	280
STRAITS SETTLEMENTS	5,058	7,368	8,149	7,683	8,072	9,138	215,058	240,206	255,353	281,933	389,843	498,547	57,150	82,055	104,628	5,387	6,525	7,954
Perak..	672	1,396	2,047	591	845	973	142,168	199,034	239,128	150,239	217,206	224,586	34,760	73,539	120,324	1,235	2,037	1,997
Selangor ..	511	1,348	2,467	590	1,255	1,596	40,640	64,952	91,787	109,598	150,908	170,687	16,847	74,067	132,545	613	1,505	1,927
Negri Sembilan ..	142	403	894	309	464	519	56,935	69,745	77,643	32,931	40,843	65,171	5,526	18,243	33,658	185	496	872
Pahang ..	134	137	278	46	85	116	73,462	87,109	102,253	8,695	24,287	34,104	1,253	6,611	8,692	523	479	616
FEDERATED MALAY STATES ..	1,459	3,264	5,988	1,526	2,649	3,204	313,205	420,340	510,821	301,463	433,244	494,548	58,366	172,465	305,219	2,556	4,517	5,412
Johore..	—	205	613	—	75	183	—	109,933	157,852	—	63,410	97,253	—	5,659	24,180	—	1,080	2,148
Kedah..	—	86	300	—	60	75	—	197,702	237,931	—	33,746	59,403	—	6,074	33,004	—	8,318	8,745
Perlis ..	—	4	5	—	1	1	—	29,598	34,165	—	1,627	3,602	—	114	811	—	1,402	1,503
Kelantan ..	—	108	127	—	11	35	—	263,914	236,363	—	9,844	12,755	—	731	3,575	—	7,143	6,445
Trengganu ..	—	10	34	—	0	8	—	149,553	145,523	—	4,169	7,246	—	61	211	—	280	743
BRITISH MALAYA ..	11,065	14,919	—	10,868	12,644	—	—	1,416,796	1,627,108	—	915,883	1,173,354	—	367,159	471,828	—	29,265	32,950

POPULATION

* Under this heading are included Japanese, Siamese, Sinhalese, Arabs and Asiatic Jews.

wives and children, and to stop the drain to China and India of wealth that has been won and should be reinvested locally, has been always the aim not only of the Government but of all employers of labour.

EUROPEANS AND EURASIANS.—The increase in the Europeans, due to the expansion of the rubber industry and in a lesser degree to the consequent larger number of Government servants, would have been greater had not the war removed enemy subjects and the recent depression in trade led many planters and commercial



MALAY WOMEN AND CHILDREN.

men to leave the country. The increase in Eurasians of 16·3 per cent. is high and not caused by immigration

MALAYS.—Malays and Indonesian races increased 14·8 per cent., and the Malays of the Federated Malay States have regained their numerical superiority over the Chinese. This increase is largely due, for example, in Selangor and Johore to the immigration of Javanese, Banjarese, Bugis and Sumatran Malays attracted by the rubber industry. But even in States where there is hardly any immigration the Malays increased: 19·8 per cent. in Kedah, 15·4 per cent.

in Perlis, 11·3 per cent. in Negri Sembilan, 6·4 per cent. despite immigration in Kelantan, which contains the largest Malay population in British Malaya. Only in Trengganu Malays decreased slightly owing to cholera, smallpox, influenza and emigration on account of the high price of rice.



MALAY CHILDREN ON RUBBER ESTATE, JOHORE.

CHINESE.—In the Federated Malay States, from the fact that the surface mines have been worked out and labour-saving machinery is now employed, and owing to the discharge of highly paid Chinese labour from the rubber estates consequent on the slump, the increase in the Chinese population is not so marked as in previous decades and mainly due to the immigration of more females; though the rubber industry caused a great rush to Kedah and Johore. Except in Kelantan and Trengganu the Chinese form the

bulk of the trading shopkeeping and labouring classes, and are the predominant race in towns, being twice as numerous as any other race in the Straits Settlements and almost equal in numbers to the Malays in the Federated Malay States.



A CHINESE BARBER'S SHOP.

INDIANS.—The increase of 76·5 per cent. in the Indian population of British Malaya, proportionately far higher than that of any other race, is due to the demand for Indian labour on rubber estates. In the Federated Malay States the bulk of the Indian peoples will be found in Krian, Lower Perak, Klang, Kuala Lumpor, Kuala Selangor and Seremban ; in Perlis they increased over 611 per cent., in Kedah over 443 per cent., in Johore over 327 per cent., in Kelantan 389 per cent. Most of the Tamils, Telugus and Malayalis are

coolies, though there are a large number of South Indian shopkeepers and traders.

ABORIGINES.—The total number of aborigines enumerated in 1921 in the Straits Settlements, the Federated and Protected Malay States showed an increase of 4,066 over the total ten years ago. This small advance in numbers would appear to be due to several causes. Certain tribes, like the Negritos of Selama in Perak, are dying out; except in remote tracts of Pahang the jungle tribes contracted influenza from Malays and Chinese and suffered greatly; in States like Negri Sembilan and in districts like Raub in Pahang the merging of the aborigines into the Muhammadan Malays is rapid. Over 4,000 settled aborigines were enumerated and many more must have called themselves Malays. Pahang (10,764) has displaced Perak (10,676) as the State containing the largest aboriginal population.

The following table shows the total aboriginal population enumerated in 1911 and in 1921 :

<i>State or Settlement.</i>	<i>Males.</i>		<i>Females.</i>		<i>Total.</i>	
	1911.	1921.	1911.	1921.	1911.	1921.
Straits Settlements ..	48	18	39	21	87	39
Federated Malay States	14,395	14,613	12,823	12,884	27,218	27,497
Johore	534	531	438	475	972	1,006
Kedah	58	42	47	37	105	79
Kelantan	—	2,233	—	1,521	—	3,754
Trengganu	—	33	—	40	—	73
Total	15,035	17,470	13,347	14,978	28,382	32,448

In 1911 the aboriginal population of Kelantan and Trengganu may have been included under "Malays" or "Others," or they may not have been enumerated at all. In the table of all nationalities given above aborigines are included under "Malays."

CHAPTER VIII

THE ABORIGINAL AND MALAY RACES

THE NEGRITO.—The earliest inhabitants of the Malay Peninsula were almost certainly the Semang of Kedah and Upper Perak or Pangan of Kelantan, as they are variously termed, a race of “Negritos,” to use a word invented by Spanish writers to describe the small, very dark, frizzy-haired race they found in the Philippine Islands. This Peninsular race is thought to be related, not only to the *Ætas* of the Philippines but also to the *Mincopies* of the Andamans. These brachycephalic (or bullet-headed), straight-eyed little folk are dying out. In the Peninsula some 2,000 have been enumerated. They are nomadic, and live on fruits and animals, practising no form of agriculture. Bows and arrows were their weapons in the Philippines, but in the Malay Peninsula, while they retain those weapons, they have borrowed also the blow-pipe from their forest neighbours who came later, the Sakais. Their houses are leaf-shelters propped on sticks, with leaf floors and no walls. They do not make rafts or boats. They fear thunder and lightning and believe in an island of fruits to which the dead fare.

THE SAKAI.—Superior to the Semang in culture is the fairer wavy-haired dolichocephalic (or long-headed) Sakai race which inhabits the mountains from Kuala Kangsar in Perak southwards down to Selangor. This race, which has mixed with the Negritos of the north and the Proto-Malays of the south, has been subdivided into the Northern Sakai of Kuala Kangsar and Kinta (or Tembe on the Pahang side), the Central Sakai of Batang Padang (or Senoi on the Pahang side), and the Besis, a tribe which has intermarried especially freely with the Jakun or Proto-Malay aborigines of the south of the Peninsula. The race has been supposed, mainly on linguistic grounds, to have Mon-Khmer affinities and to have come down from Indo-China, and again on anthropological grounds to be related to the Toalas of the Celebes and the Veddas of Ceylon. The Sakais have sturdy bodies, fair brown

complexions and straight or wavy hair: they adorn their faces with painted lines and patterns. Though certain tribes have adopted the bow and arrow, their own weapon is the blowpipe. It is a long hollow bamboo with a mouthpiece. In it is put a



A NEGrito.

tiny dart, poisoned with a vegetable poison, and this dart is blown out with wonderful accuracy. The Sakais live in well-built pile houses, and sometimes in communal dwellings. They plant millet, sugar, tobacco, plantains and hill-rice, moving on to fresh

clearings after their crops have been garnered. Politically they consist of tribes or families under patriarchal chiefs. They stand in awe of evil spirits that bring sickness; they place food and personal belongings on the graves of their dead, and reserve tree-burial for their magicians so that the tiger, the wizard's familiar, may rend the corpse and release his spirit. In number they are some twenty thousand.

THE BESISI.—The odd thousand people who form the mixed Besisi race build fair houses and some live in lofty tree-huts. They have the tribal headmen of the Proto-Malays, their southern neigh-



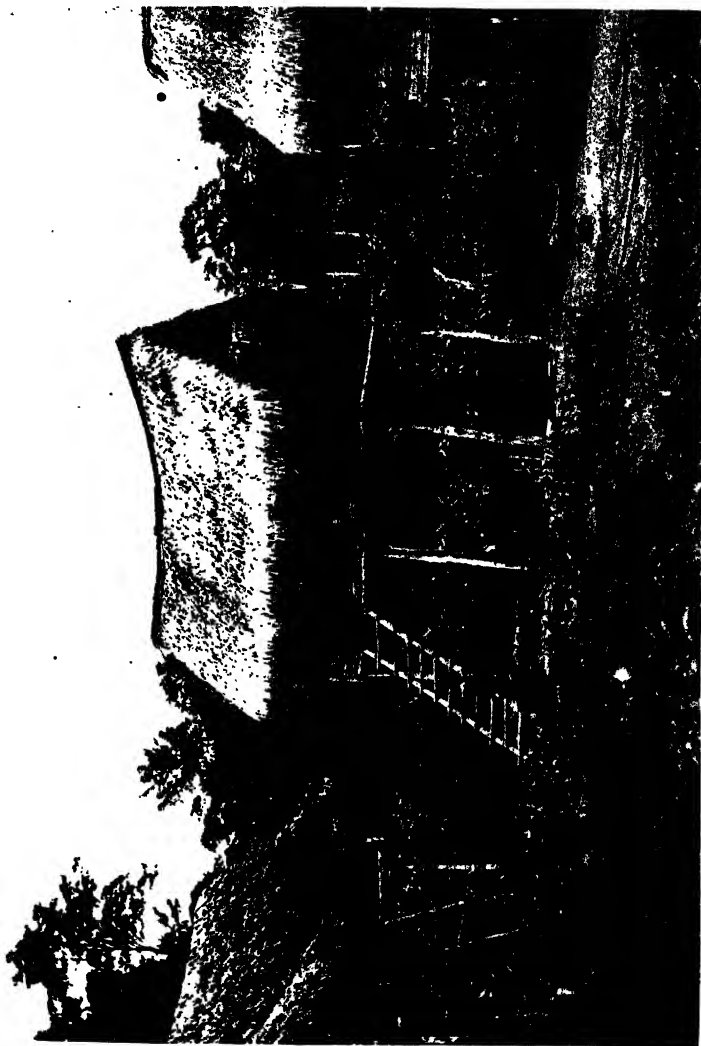
SAKAI, ULU KAMPAR, PERAK.

bours, whom physically also they resemble. They have primitive songs, and in their betrothal sayings the suitor describes the girl he is wooing as a filly, a mastless and sailless boat, or a flower.

THE PROTO-MALAY.—Of the early history of the Malayan race we know nothing except by inference from physique, language and customs. The evidence of physique alone is not enough, because races have intermarried so much; the evidence of language alone is not reliable, because owing especially to conquests different races may come to speak the same language; and so, too, with the evidence of beliefs and customs. But if we put these three kinds

of evidence together, we reach the best result we can about races to whose early history we have no other clue.

Now in the south of the Malay Peninsula, in Southern Pahang,



SAKAI VILLAGE. SUNGKAI. PERAK.

Negri Sembilan and Johore, as also in the Riau-Lingga Archipelago, in Bangka and along the east coast of Sumatra, are scattered a bullet-headed, straight-haired jungle-folk, who if dressed in Malay costume are hard to distinguish from civilised Malays. In the

Peninsula they are known generally as Jakun, and specifically as Biduanda in Negri Sembilan, Blandas in Selangor and Mantra in Malacca. The coastal or maritime tribes are termed Orang Laut or "Sea Folk," but include many separate communities such as the Orang Glam and Orang Seletar, named after districts of Singapore. The Portuguese called them Saletes (people of the *Selat* or "Straits"). Godinho de Eredia wrote in 1613: "Before the founding of the town of Malacca, the place was inhabited by Saletes, a race of fishermen, who settled themselves under the



JAKUN, TEMBELING RIVER, PAHANG.

Malacca trees there. They used pointed javelins called *saligi*, and pursued fishes with such address that they could transfix them in the depths of the sea, and they used no other weapon." One of these people is the "Orange Lord" of Kipling's tale, and their half-civilised descendants may be seen at Singapore diving from dug-outs for coins thrown to them from ocean steamers in Keppel Harbour. Most of them know nothing of agriculture and live, the jungle tribes on fruits and the flesh of wild beasts, and the sea tribes by fishing. All recognise the patriarchal rule of headmen

called Batin. Some of them in Pahang and Johore use an elaborate tabu language during the collection of wild camphor. Some have tribal lays recording their customs and traditional wanderings. For a long time enquirers tried to discover the language of these jungle folk. It has now been recognised that nearly everywhere they talk Malay. But the language they speak is not quite that of the Muhammadan Malay of the Peninsula. Moreover, if they had associated with the civilised Malay so closely as to lose their original language and adopt his, he would certainly have converted them to Islam. Physique and language show that they are primitive Malays. And the evidence of beliefs bears out this surmise. Just as many civilised Malays still believe that corpses of men and animals, trees and rocks, and mountains and weapons have guardian spirits, mostly evil, so, too, do these primitive people. Their religion is animism, the belief that sticks and stones are animated by living spirits. When the primitive Malayan race migrated from Indo-China down to Sumatra and adopted first Indian culture and then Muhammadan, the ancestors of these wild tribes must have lingered behind up the creeks of the Peninsula and the adjacent islands, retaining the habits of nomads and never adopting those of pastoral peoples who build houses and plant permanent crops.

The Minangkabau colonists of Negri Sembilan, having matriarchal theories of the rights of property, named their own leading tribe the Biduanda tribe, a tribe not found in Minangkabau itself, after the aboriginal mothers of the land. Seeing how in the seventeenth-century "Malay Annals" the original Chinese settlers in Malacca are termed *Biduanda China*, it is possible that the name of this Negri Sembilan tribe dates back to the fifteenth century, when the Malay chiefs of the old independent kingdom of Malacca were overlords of the hinterland called later Negri Sembilan, and their representatives, having intermarried with Proto-Malay women, became for the later matriarchal Minangkabau colonists the leading land-owning tribe.

Speculations as to the origin of the Malayan race have been many. Ethnologists have connected them with a family that spread over Asia east of the Ganges, embracing the eastern and western Tartars, the Kalmuks, Chinese, Japanese and other races as far as New Guinea. Again it has been supposed that before Borneo and Sumatra were separated by sea, they were the cradle of a Proto-Malay or Indonesian race, which survives comparatively

pure in the Torajas of Celebes, the Tenggerese of Java, the Gayos of Sumatra, the Dayaks of Borneo and in some tribes of the Philippines and Indo-China. Another theory sees prior to the separation of the islands of the Archipelago an original family wholly different from the Malay, and embracing the peoples that the last theory took to be Proto-Malays as well as the Queenslanders: besides, but apart from this family, there is the Proto-Malay and the mixed coastal Malay. Kern found the home of the Malay in Champa, Cochin-China and Cambodia. On linguistic grounds it has been surmised that the race came from the tract of country between India and China, because to this day languages more or less distantly related to the Malayan languages are spoken by people so far apart as the Chams of Annam, the Talaings or Peguans of Burma, the Khasis of Assam and the Mundas of Chota Nagpur in India.

Perhaps the Proto-Malay race is a collection of blends, in which a Mongoloid strain exists in varying percentages. Or possibly it is only the dolichocephalic race represented by the Sakais, but overlaid with Mongoloid strains. It is certain that the typical civilised Indonesian peoples, Javanese and Malays, are variants of the Proto-Malay race with Indian, Arab and other foreign admixtures. But the linguistic and certainly the ethnographic material have not been worked out as yet.

THE MODERN PENINSULAR MALAY.—In the Peninsula there is a noticeable physical difference between the tall Kelantan Malay and the smaller Malay of the more southerly States. In recent historical times the mixture of Malay races has proceeded rapidly in British Malaya. In Perak, for example, the real Malay of that State is to be found only down the Perak river, and up some of its tributaries, like the Kinta. Krian, Larut and Matang are full of Kedah people; Gopeng is populated by Rawas; Sumatran immigrants—namely, Rawas, Mandelings and Korinchis—bulk large in Batang Padang; Lower Perak is full of Javanese, Banjarese and other foreigners from the Archipelago. Even down the Perak river the population is not pure, though the mixing goes back to the seventeenth century, when Arab Sayids from the Hadramaut filled high offices of State, founded a branch of Perak nobility and dominated several village settlements, or when the Achinese led the ruler of the State into captivity and left strong traces of Achinese influence at Sayong near Kuala Kangsar, or again when later the Bugis came and founded Bandar lower downstream and won two high

offices for their chiefs. Similarly on the east coast Raub and Bentong are settled by Sumatran foreigners. Only the river people count as real Pahang Malays, and even they and their language are described in the *Hikayat Hang Tuah* as "mixed" in the days before the Portuguese took Malacca. Old Malay Malacca was full of thousands of Javanese and many Muslim Gujeratis and Tamils, and these aliens must have left their mark on a population that was a collection of strangers from the beginning. Selangor may have traces of old Malacca suzerainty, but the modern nobility are Bugis and there have been numbers of recent Sumatran immigrants. Negri Sembilan has been Minangkabau almost from the first. In Kedah and the Northern States there has been an infusion of Siamese blood. Again, in every State in the past there has been intercourse with the aborigines, and aboriginal women have borne children to Malay fathers. Wavy or curly hair, dark complexions and other evidences of Semang blood distinguish the Malay of Upper Perak. South of that there is the lank-haired Indo-Chinese Malay type, whose ancestry is Sakai on the distaff side. In Negri Sembilan, as noted already, the leading land-owning tribe boasts of its Biduanda, or Proto-Malay blood, though the infusion probably occurred more than four hundred years ago. "The Peninsular Malay of to-day is almost as much a product of the confusion of races as the modern Englishman, and reversions to any one of his ancestors may be supposed to occur at intervals among his children; nor does the fact that many of the races from which he is descended were near akin make it any the easier to unravel the history of his ancestry. Moreover, the Malays of the Peninsula have never been welded into one nation."

The colour of the Malay ranges from dark olive through red to olive. His hair is straight and of a lustrous black: on face and body it is always scanty. The eyes are black or of a reddish-brown colour, and in some persons slightly almond-shaped and oblique. The typical Malay nose is flat and broad but with a definite bridge. The hands and feet are small and finely moulded. The jaws and lips project a little but not unduly. Cheek-bones are usually prominent, chins square and teeth very white. The height of the Malay is about 5 feet 3 inches, his body well-knit and exceedingly well-proportioned.

The impassive features of the Malay have a frank, ready smile for friends and for the ludicrous. To friends he is loyal so long as they can serve or interest him, and perhaps an enervating climate

prevents him from cherishing great passions and undying enthusiasms. His wife he loves frantically in youth, and later defers to her from the habit of an easy-going temperament and perhaps the subconscious obsession of bygone centuries of matriarchy: she is never a doll or a chattel, but a shrewd, energetic helpmate. The only common occasions of polygamy, divorce and infidelity are the temptations of high rank, pride of purse and childlessness. Children the Malay loves, and, though he indulges and never strikes them, his method of upbringing produces paragons of perfect manners and filial love and obedience. Born into a society with



A MALAY BOY.

an elaborate etiquette, which it is his pride to observe, he is a good judge of the social standing and breeding even of foreigners. And albeit a convinced if tolerant Muhammadan, he judges actions instinctively, not by Muslim commandments, but as seemly or unseemly as one judges "the complexion of a flower." He has a keen and cynical sense of humour, but pride in his race, his breeding and his religion rather than humour solaces him when he is the victim of rudeness from a foreigner. "His courage," as Swettenham says, "is as good as most men's, and there is about him an absence of servility which is unusual in the East." He resents

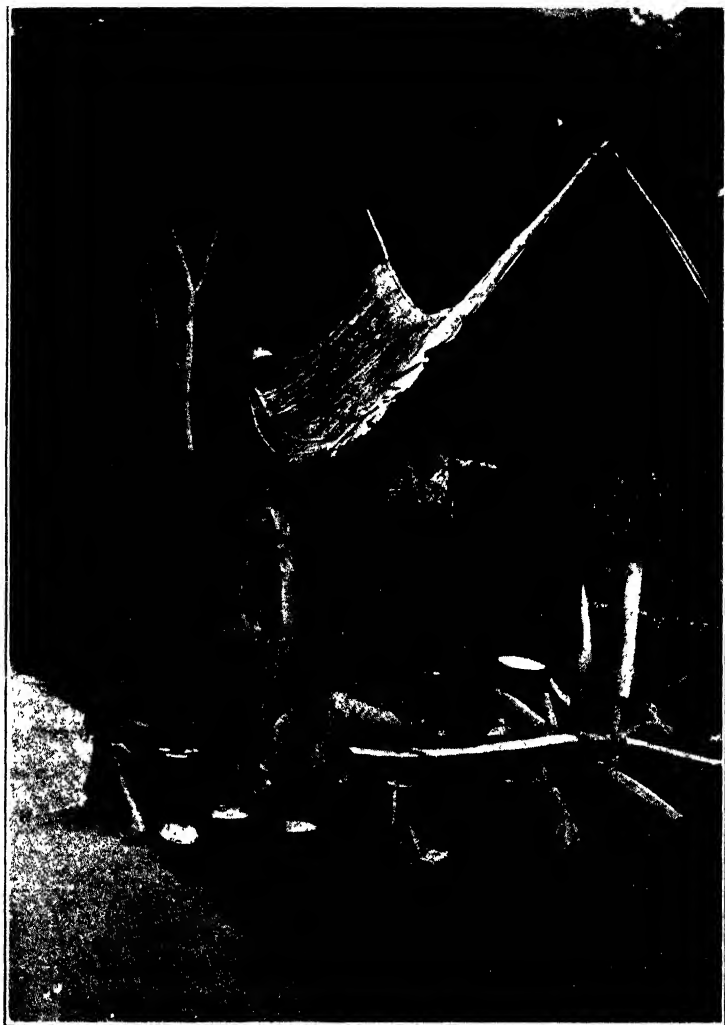
insult bitterly, is sensitive to ridicule and sarcasm, but responds to praise and encouragement. As a youth he is inclined to swagger and be extravagant; with the coming of years he tightens his purse-strings and turns to agriculture, village politics and religion. Always he is adroit and diplomatic. And except when spoilt by contact with alien ideals of conduct imperfectly understood, or by an English education in a cosmopolitan welter of foreign students, he has the charm of a gentleman trained from the cradle in good manners and social tact.



A MALAY GIRL.

The Malay has a reputation for great indolence. A moist tropical climate, malaria, a soil that tickled laughs with crops, the sumptuary laws of his chiefs, which made fine houses and fine clothes dangerous for the peasant—all these have contributed to his choice of a quiet, unambitious life. But the reputation for laziness is not entirely deserved. He has jumped in fifty years out of the pastoral age into an age of steamships, railways and motor traffic, out of a patriarchal age into a crowd of alien wage-earners and capitalists. He is adapting himself to the change, but not more quickly than the struggle for existence demands. He would

rather paddle all day on a river or work in the mire of rice-fields than become a clock-driven slave of the workshop and office. But he is diligent where his interest is aroused. The peasant



MALAY BULLOCK-CART DRIVERS RESTING.

makes an admirable survey-coolie and chauffeur; the gentleman a good settlement officer and a sensible magistrate and district officer.

MALAY DRESS.—Though it is being discarded for workaday European khaki, the Malay man's national dress consists of loose trousers, a loose jacket, and a tartan skirt (*sarong*) bundled about his waist and reaching to his knees: on his head he wears a kerchief or a velvet cap. The words for coat and trousers are Persian, so that these articles of attire probably came from India with Islam. A covering on the head, even if it be only a wisp of palm-frond tied round the brows, is more important according to strict Malay etiquette than a coat.

The Malay woman wears a skirt like a man's but down to her



A MALAY HOUSE.

ankles, and the most popular type of lady's jacket, which reaches to the knees, bears a Portuguese name. Over her head she wears another *sarong*, or scarf or mantilla. She affects anklets and bracelets, earrings and brooches and neck-chains. In spite of Islam she goes abroad unveiled, takes part in her husband's affairs and exhibits her finery at festivals.

MALAY HOUSES.—A Chinese chronicler of the fifteenth century described the houses of Malacca Malays at that period as "built rather high and having no floor of board, but at the height of about four feet a floor of split coconut trees which are fastened with

*
rattan; on this they spread their beds and mats, on which they sit crosslegged, while they also eat, sleep and work here." Similar is the real Malay house to-day. The ground-plan is simple. It contains a front verandah for the reception of guests, a central room for sleeping and a back verandah or adjunct for cooking. The high floor raised on piles, the concave roof, modelled it is supposed on the slopes of a tent, the tiered roofs, which have survived as a mark of dignity in a few mosques and houses of chiefs, have all been traced to an Indo-Chinese source. The change from palm-thatched huts to wooden houses was due probably to Indian influence. As early as the fifteenth century Chinese glass and tiles and gilding adorned the palaces of Malacca Sultans. To-day not only Chinese but European design and craftsmanship also mark the houses of the well-to-do.

CHAPTER IX

LANGUAGE

FROM the philologist's point of view, the Negritoes of the Philippines are in a worse case than the Indian people, whose language was preserved by a parrot, because the tribe had been exterminated: they have lost their language and speak a Malayan dialect. The Semang of the Peninsula still have a number of words of a distinctive type that have not been traced to a Mon-Khmer or Malayan source and may represent a language modified by foreign influence. Phonetic laws, connecting Semang with Andamanese, have not yet been traced.

Sakai dialects would appear to have been related from the first to the Mon-Khmer languages, as Nicobarese and Khasi are related. Probably, too, some of these tribes, like the Besis, have come again under Mon-Khmer influence at a period not very remote.

The Jakuns speak a Malayan dialect, which, however, contains a number of unexplained and possibly alien words.

Malay is the tongue of the Malay Peninsula, which embraces the Straits Settlements, the Federated and Protected States, and in the extreme north, under Siamese protection, Patani. It is also the language of the Riau Archipelago, of most of the east coast of Sumatra and of the greater part of the coast of Borneo. It is closely allied to Minangkabau, the language of the central Sumatran highlands. Muslim traders, the Portuguese, the Dutch all used and spread Malay as a *lingua franca*. Sumatran peoples, like the Achinese, with vernaculars of their own, have been content with Malay translations of Arabic religious treatises. So, Malay has become the religious and commercial language of the Archipelago.

The language belongs to the Malayo-Polynesian, or Oceanic or Austronesian family, as it has been called variously, which covers an area from Formosa to New Zealand, from Madagascar to Easter Island, and includes the languages of the Philippines, the Malay Archipelago, Micronesia, Melanesia, a small portion of New Guinea and Polynesia. To the easternmost branch belong the languages of Samoa, Tahiti and Tonga. To the western branch belong Malay;

Malagasy; Tagalog, Bisaya and Bontok in the Philippines; Batak and Minangkabau in Sumatra; Sundanese, Javanese and Madurese; the Dayak dialects of Borneo; Macassar and Bugis in the Celebes; and many other less known tongues. This western branch is termed Indonesian, rather unfortunately, since for ethnologists the word defines a particular physical strain found in the Bataks and the Dayaks, and in the Torajas of Celebes.

The big Malayo-Polynesian family has been definitely connected with an Austro-Asiatic family of languages, spread over the south-east corner of Asia and embracing Munda in Central India, Khasi in Assam; Mon or Talaing in Burma and Siam; Khmer or Cambodian and other languages of Indo-China; Nicobarese, and the aboriginal languages of the Malay Peninsula.

Of course, even within the western or Indonesian branch of the Malayo-Polynesian family, languages differ more widely than English from Dutch, or French from Italian. Comparative study of the group shows that Malay is well preserved phonetically, but its grammar, like our own, has become simplified. Of recent centuries, however, the change and progress in Malay have been change and progress in vocabulary. The "Malay Annals" written about 1612 are far more like modern Malay in style and language than Elizabethan prose is like English prose of to-day. Only under Arab and European influence has Malay literary style shown a tendency to deteriorate and depart from the spirit of the language. In addition to adopting many Arabic words the Muhammadan writer, whose reading is Islamic theology, has adopted many Arabic constructions, the use of auxiliaries, and the use of prepositions to denote case, where his own colloquial idiom can be clear and brief without such excrescences. The Malay, with a knowledge of English, is apt to overlook entirely the difference between European grammar and his own grammar, wherein the verbal idea, the action, process or dynamic element of the sentence is often the grammatical as well as the logical subject.

Of course, the adoption of foreign words to describe ideas or novelties is a sign of vitality in a language. The Malay language has a dozen words for "fall," "hit," "carry" and so on, and terms for every instrument and process of agriculture, but it is destitute of words to express feelings and abstract ideas. Long before the coming of Islam, Malay borrowed many Sanskrit words, not only for religious and ethical ideas but words for "price, property, work," for "plough, weapon, wheel, coffin, prison, bell," words for certain

fruits and flowers, words for feelings and sensations, a court vocabulary and a few astronomical terms. Hardly any loan-words are Prakrit. Seeing that Islam came first from India, Persian, the literary and diplomatic language of the Muslims of Northern India, left traces, secondhand and not direct, mostly literary and not colloquial. Hindustani has left words for "reins, glanders, stable, buggy"; for "vinegar, bread, rice-gruel." There are many loan-words from Tamil, the language of Muslim traders who have trafficked with Malays for centuries: words for "ship, bed, curtain, carat, bowl, matrix, screw-jack, wedge, pond, coriander, water-melon, gratis." In Penang there has been the strong and more



C. Ishii.

A MALAY PLOUGHING, MALACCA.

recent influence of Tamil settlers intermarried with Malay women. Arabic words came into the language first from Southern India, whence Islam brought the Malay script, and later, a God's plenty, from the Hadramaut and Mecca. Portuguese left words for "velvet, pump, ball, fork, table, bench, pin, bullet, ribbon, lace, shoe, gold-leaf, tape, shirt, gown, towel, auction, inspector, priest, torture," and other attributes of European civilisation. A fair sprinkling of culture-words has come later from Dutch and English.

Of Malay words adopted by the English language, the commonest are "amuck, creese, bamboo, rattan, sago, gutta-percha, caddy, orang-outang."

With Islam the Malays adopted the Persian form of the Arabic alphabet. Modern usage, however, has dropped vowel points and, except under the direction of Dutch scholarship, inserts and omits vowels in an arbitrary and erratic fashion, in the Peninsula generally regarding the practice of Munshi Abdullah as infallible. The Arabic spelling, therefore, is an insufficient guide to the pronunciation of most Malay words. It is possible that in time Malays, like the Turks, may solve the difficulty by inserting all the vowels. In vernacular schools the writing of Malay in Latin as well as Arabic characters is taught. This Romanised script, though unpopular with the religious, serves as the only means of written communication between Malays and the majority of Europeans, Indians, Chinese, and Japanese whom commerce has brought to the Peninsula; moreover, it is an incalculable help to the many Malay students who are ambitious to learn English. The system of Romanised spelling is closely modelled on that in use in the Netherlands Indies.

“Riau-Johore” Malay is always rightly accepted as the model of correct pronunciation. With little variation it is spoken in Malacca, its original home, and in Johore, Selangor and Pahang, all countries that came under the influence of the old Malacca dynasty; it is to be found also in Singapore. In Negri Sembilan it has modified the speech of the Minangkabau colonists. In Riau-Johore Malay words are pronounced approximately in accordance with the classical spelling.

In the north of the Peninsula there are marked dialects: in Kelantan, in Kedah and Penang, in Perak. Only lately have these dialects received scholarly attention, and comparative work still remains to be done. It is possible that aboriginal, Mon and Siamese influences have clipped and shaped the speech of these States. In parts of Perak and Kedah Achinese influence may be expected. In Penang Tamil influence has been strong.

CHAPTER X

MALAY LITERATURE

EXCEPT for the Indian script of some tenth-century Minangkabau memorials and the Venggi characters of the Kota Kapor inscription (p. 126), there is no Malay writing in other than Perso-Arabic script, and there are no records of the Malay language free from Arabic loan-words. The most primitive forms of Malay literary effort are riddles, proverbs and beast fables. Even here it is hard to put one's finger on the indigenous element. From India there came to Malaya Hinduism, Buddhism, and last of all Islam. Among everyday Malay proverbs one lights not only on Indian sayings such as "The fence devours the crop," but on Arabic sayings such as "A dog's tail can never be straight," "A rose fell to the lot of a monkey," "Who can plaster over the rays of the sun?" Many Malay mouse-deer tales (of which Skeat has given English renderings in "Fables and Folk-Tales from an Eastern Forest," and George Maxwell in one chapter of his book, "In Malay Forests") are borrowed from Bidpai's Fables and from Buddhist Jataka tales. The stories of divination by Pa' Bilalang, full though they are of local colour, are derived from the *Katha Sarit Sagara*, the work of the Kashmirian Somadeva eleven centuries after Christ. The story of how a prince sends the husband of a beautiful woman on a quest for a bearded civet cat (a parody on the common plot of the search for a rose or other rare object to cure a king's malady) comes, with the addition of a Muslim turban for the erring bearded priest, from the *Sukasaptati* and the *Hitopadesa*. The plots of folk romances, like the tale of Malim Deman who stole the flying garments of a fairy princess and married her, are mostly Indian. The stock description of woman's beauty—"her face like the moon of the fourteenth day, and her lips like a bursting pomegranate"—is Persian. The *pantun* is now purely Malay in imagery and language, and beautiful with a simplicity, sensuousness and passion that show no traces of translation:

*"Hard the divorce of love and lingering
Like a kite that waits the wind."*

"Of gold be the mat and golden the pillows,
But the arms of my love are the pillow for me."

"Muhammad loved but God Almighty ;
My mistress, mark you, was not born."

"From cotton coarse our thread we fashion,
From the thread our fabric's wove.
No remorse ! When sped our passion,
Think me dead and not your love."

Yet it is doubtful if the elaborate structure of these popular quatrains, with the assonance of their rhyming lines, is not of foreign, perhaps Persian, origin, especially as examples in seventeenth-century Malay literature are tentative and crude. As in Chinese odes, so in their first couplets "a peculiar, natural phenomenon, a well-known event or occurrence is mentioned as an introduction, not unlike a clever arabesque to prepare reflection and the proper frame of mind for what follows." The Chinese babas of Malacca love the Malay quatrain, and are adepts at improvising them.

Many classical Malay works are translations. The Mahabharata has been rendered into several volumes under the title of the *Hikayat Pandawa*. In the Bodleian Library there are manuscripts dating from A.D. 1600, of a Malay translation of a Tamil recension of the Ramayana and of another of the Persian "Tales of a Parrot." To the same period belong the historical romances of the Muslim heroes, Amir Hamza and Muhammad Hanafiah, both adaptations from the Persian, and in 1601 Cambridge obtained a manuscript of the story of Joseph and Potiphar's wife. The *Bustanu's-Salatin*, the *Taju's-Salatin*, the two histories of Alexander the Great as a Muslim conqueror and as a disillusioned world-conqueror, all works modelled on Persian originals, were done into Malay early in the seventeenth century. Laws are hardly literature, but there are Kelantan port laws dated 1650 that resemble closely those of the Moguls recorded in the *Tarikh-i-Tahiri*.

Old Malay literature owed much to the pre-Islamic influence of Java, especially to the twelfth-century cycle of Panji tales named after a prince who, tiring of court life, fled and served as a simple soldier, undergoing many transformations and marrying many brides before he was joined on the field of battle to his betrothed, Princess Chandra Kirana, who in disguise had followed him. The *Misa Përbu Jaya* is a favourite in the Peninsula. Some of the Malay versions of Javanese tales, like the *Hikayat Maharaja Boma* elaborated from the Kawi poem *Bhomakavya*, are founded on old Javanese models

and antedate the modern Javanese texts. Many are fairly recent. But Islam brought a change of taste and introduced the romances of the Deccan. Even these last were reprobated by Indian missionaries, and in 1634 that prolific Malay writer, the Rajput translator of the Persian story of Alexander the Great as a Muslim conqueror, condemned as profane the *Hikayat Indraputra*, a Malay pastiche of Southern Indian tales. Some of these tales, like the *Hikayat Parang Puting*, make Brahma the Supreme God; most contain allusions to Allah; all are of the same type, and parallels may be traced in Sinhalese, Kashmirian and Punjabi folk literature. Princes, driven by omens or dreams to wander, fight terrible demons with the help of magic charms got from friendly spirits or hermits, call into being towns and palaces and armies of genies from a magic box or jewel, win brides guarded by demons and jealous suitors, and come home at last, happy, victorious, their quest accomplished. Almost the same plot occurs again and again. The gist of the *Hikayat Indra Bangsawan*, for example, is nearly identical with that of the *Gul Bakawali*, a modern Malay adaptation of Nihal Chand's Hindustani version (A.D. 1803) of the Persian "Romance of the Rose." The inseting of tales within the framework of a longer tale is a device of which no examples outside Indian influence occur, except Ovid's "Metamorphoses": it is common in Malay works, and found in the *Hikayat Puspa Wiraja*, in the *Hikayat Bakhtiar*, both from Indo-Persian originals, and in the *Hikayat Nakhoda Muda*, which contains the plot of "All's Well that Ends Well," got by Shakespeare from Boccaccio, and by him from the East. Even the Malay versions of Arabic tales, such as the stories of Abu Nawas and of Tamim a'd-dari, have an Indian tinge.

All these influences affect the seventeenth-century Peninsular romance of Hang Tuah, a Malay hero of Malacca, who is credited not only with posthumous exploits against the Portuguese invader, but with romantic adventures borrowed from Tamil, Persian and Javanese literature, from the Ramayana, the Panji tales and the lives of Muslim saints. Nor are these foreign elements entirely absent from the "Malay Annals" of the old kingdom of Malacca, written about 1612 at Batu Sawar by a Johore nobleman, the most valuable and entertaining of Malay histories, parent of such Peninsular works as the "Kedah Annals" and Perak's fine eighteenth-century chronicle, the *Misa Melayu*.

There is a large and growing prose literature on Islamic theology and jurisprudence, tracts on the popular mysticism of India, ortho-

dox works on the first principles of Islam and on the whole duty of Muslims, on Arabic grammar and Shafeite law. There are translations, for instance, of al-Baidhawi's commentary on the Koran, and of works of al-Ghazali. This branch of writing, being permeated with Arabisms, is marring Malay literary style.

The old Malay style, perfect in the "Malay Annals," was assailed by a well-known Peninsular author, Munshi Abdullah (1796-1854), born in Malacca, of Arab and Tamil descent, who, finding Malay authors euphuists of the Court, would have left them polyglots of the bazaar; but he has had no followers. He translated a Tamil version of Bidpai's Fables, a Persian recension of which had been done into Malay at least as early as the beginning of the eighteenth century. He wrote a delightfully naïve account of a trip to Kelantan and the East Coast. His autobiography, with its vivid intimate picture of Raffles, has been read by generations of European students. He left a few pages on the pilgrim voyage to Mecca. He wrote a poem on the "Burning of Singapore" in its early days.

For, besides the *pantun*, there is a large body of Malay poetry, bearing the Arabic name *sha'ir* and consisting of stanzas of four rhyming lines. Many of the most famous of these, such as the *Sha'ir Ken Tembohan* and *Sha'ir Bidasari*, are from the Javanese. Many are versified versions of well-known Malay romances. Some deal with mysticism and religion. In much erotic verse, the passion of lovers is allegorised as the desire of the bee for the flower, of the owl for the moon, and so on. Most of this poetry is comparatively modern.

The catalogues of Malay manuscripts at Leyden and Batavia alone fill over 1,200 printed pages. But Malay literary works are seldom dated and their authors seldom known. Generally we cannot say what romances, poems and religious works were done in old Malacca or at the Courts of Kedah, Trengganu and Johore. But the Malays of the Peninsula have certainly to their credit the romance of Hang Tuah, the "Malay Annals," the "Kedah Annals," the *Misa Melayu*, the works of Abdullah. It is a respectable record, as Malay literature goes. And perusal of the vernacular press to-day will show that the literary spirit is still strong in the Peninsular Malay, though it is overlaid with the tradition of translation, obsessed with religion and groping in the dark for material.

CHAPTER XI

MALAY BELIEFS AND RELIGION

THE Malay retains beliefs from the time when, as an animist, he believed all things possessed souls, from Hinduism and from Islam.

ANIMISM.—Becalmed at sea, he invokes the wind to let down her long hair and fill the sails of his boat. As an animist, too, he propitiates unseen maleficent powers of hill and forest, river and tree, beast and corpse, that bring sickness, epidemic and death. Before he plants house-pillars, he propitiates the spirits of the soil he is violating. Before he begins to fish or hunt, he not only addresses the spirits of sea or forest with conciliatory words, but declares to fish and beast that not he but his gun or his net will be guilty of molesting them. Seeing that animals have understanding, he will take care not to refer to them rudely by their names. He will call the tiger "grandsire," a crocodile "tree-log," snakes "living creepers." Sometimes he will use a speech that is not Malay, so that the beasts may fail to comprehend its purport. With these ideas, he believes in sympathetic magic. The hunter who would hook a crocodile must gulp down his rice to help the bait's passage down the beast's gullet, and he must remove no bones from his food for fear the hook may not bite. If the traveller meet tiger tracks in his path, he may cover them with leaves and the beast will be unable to retrace his steps towards him.

Rice-seed the Malay plants tenderly, pretending he is restoring a child to her mother. He reaps his crop not with a rude sickle but ear by ear, with a tiny bird-shaped knife, so that the soul of the rice may not be scared away from his fields. Three days before the harvest may begin, he invokes that soul, which comes with the sound of a breeze in the form of an insect or of a beautiful girl, and inhabits the seven bunches of grain cut from seven-jointed stalks by a medicine man, who closes his teeth and holds his breath for the delicate task. The stalks whence the ears

have been cut he smears with clay, as salve for their hurt from the knife, and hides them under neighbouring stalks that are whole. Malay animistic ideas about trees and plants are derived neither from Hinduism nor from Islam.

INDIAN INFLUENCE.—The Malay has borrowed much from India both before and since he became a Muslim. The Malay mimic conflict for the person of a bride was observed in ancient India and is widespread in Europe. So, too, the throwing of rice at weddings, the celebration of marriage by bride and groom feeding each other, and the custom of treating the bridal couple as king and queen on the wedding day. Besis betrothal sayings speak of the girl as a filly; Malays, Esths, Finns and Sardinians speak of her as a bird or a calf. Belief in were-tigers is current throughout Asia, and belief in were-wolves throughout Europe. All these customs and ideas are very primitive. The Spectre Huntsman of the Malays is identified by them with Shiva, just as the Wild Huntsman of Europe with Odin or Wodan; and this coincidence supports the Indo-Germanic theory that Shiva and Odin are avatars of an early storm-god, their common source. Like the Brahman, the Malay magician exorcises evil spirits by reciting secret traditional charms, declaring that he knows the origin of the spirits; and prefacing his invocations with the mystic *Om*, he addresses unseen hostile powers vaunting himself mightier than they: " 'T is not earth that's my foot-stool, but the skulls of every living thing." Like the young Brahman, the Malay often has to use a tabu vocabulary. Like the Brahman, the Malay husband of a woman who is with child may not have his hair cut; and he guards the mother of a newly-born child from evil by placing iron or steel on her bed, and paints the caste-mark of the Hindu on the head of the infant. Like the Brahman, too, he takes a child out formally to see the sun and tread the earth for the first time; and like him he cuts his son's hair, except for one long lock, with seven strokes of the scissors. Malay marriage ritual is full of Brahminical ceremony. "In the bridal rice shared by the newly-married pair, in the bridal thread passed round them at the lustration, and in the bathing pavilion erected for this rite, we have not only Indian customs but actual Indian names." For the Malay as for the Hindu bride, the height of becoming conduct is a display of excessive modesty. Like a Hindu prince, a Malay Raja will send his creese or dagger to represent him if he weds a commoner wife; and the hilt of his dagger is carved after the likeness of the Garuda whereon Vishnu rides. Though he is unaware of his in-

debtedness, the Malay has followed the code of Manu in regarding physicians, usurers, sailors, dancers, one-eyed persons and persons with thick hair on their bodies as people to be avoided.

ISLAM.—Mostly, it is difficult to determine what beliefs the Malay borrowed from India as a pagan, and what, after his conversion to Islam by Muslims of Southern India who were similarly indebted to Hinduism and had adapted to the faith of the camel-driver the charms and incantations, the beliefs and customs of their ancestors. To take a few examples. By the Brahman, the Indian Muslim



A TRIBAL FEAST, NEGERI SEMBILAN.

and the Malay, there is a ceremonial bathing ordained for a woman in the seventh month of her pregnancy. The Brahman touches the tongue of a child thrice after birth with honey and *ghi*, reciting a verse from the Rig-Veda, wishing long life and happiness. Muslims of Arabia, India and Malaya observe the same ceremony, substituting a verse from the Koran for that from the Rig-Veda. A common beginning for a Malay love-charm is:

*"In the name of Allah, the Merciful, the Compassionate:
Go, arrow of Arjuna,
Pierce the heart and the liver, the seat of the passions of my beloved!"*

Often all three layers of Malay belief may be found together. Incantations at rice ceremonies address at once the rice-soul, Sri, the Hindu goddess of crops, and Solomon, guardian of all living creatures. "The fishermen along the coast of the Peninsula



A MALAY BRIDE.

sacrifice to four great spirits of the sea, who go by many names, but whose scope of authority is always the same—one is the spirit of the bays, another that of banks or beaches, another that of headlands, and the last and fiercest is the spirit of tideways or mid-

currents. So long as things go well, the names of the four Archangels are considered sufficient; if things go badly, Sanskrit names are used; if matters become desperate, the fisherman appeals to the spirits in pure Indonesian terms they cannot fail to understand."

The early Muhammadan missionaries came from the Coromandel Coast and Malabar, whose people are Sunnites of the Shafeite school. And to this day Malay Muhammadanism bears traces of its immediate origin. Like their early Indian teachers, the Malays formerly worshipped saints both living and dead, split themselves into warring sects, and accepted a pantheism, which was not as in Arabia the esoteric speculation of the few, but as in India the faith of the mosque and the marketplace. The path of the Sufi is expounded even in one once very popular romance, the *Hikayat Shah Mardan*. In the charm-books of Malay magicians there can still be traced the influence of such works as al-Jili's "Perfect Man" with its mystical doctrine of the Muhammadan Logos (derived ultimately from Neo-Platonism), that left so deep a mark on Malay beliefs in the sixteenth and seventeenth centuries. The "Malay Annals" relate how a Meccan came to old Malacca to teach Sufism, and how Sultan Mansur Shah sent an embassy to Pasai to enquire if those in heaven and those in hell were kept in their respective places for all eternity. Pasai's pundit openly quoted orthodox views from the Koran, but later in private gave another reply, which won the gold and slave-girls offered by Malacca's ruler for an acceptable solution. The reply is not recorded in the "Malay Annals," but it can be read in al-Jili's *Insanu'l-Kamil*. The famous heretical mystic, Hamzah of Barus (*fl.* A.D. 1600), tells how he visited Pahang. Even in quite recent times in the Malay Peninsula there have been suppressed teachers of heterodox and orgiastic mysticism, whose creed was a travesty on the famous cry of Abu Sa'id, "There is nothing inside this coat except Allah." Respect for the fasting month is natural in admirers of saints and Sufis. But perhaps the leaning of early converts towards mysticism has been responsible partly for the Malay's lax observance of the five daily prayers. His race sends very many pilgrims to Mecca, and easy pilgrimage by steamship and the influence of Sayids from the Hadramaut have brought him into the fold of orthodoxy. Ghazali has ousted al-Jili, and the old heterodox schools of mysticism have given way to orthodox Meccan orders like the Naqshibandiyyah. A few of the younger generation, who have had an

English education, turn their eyes towards Woking and affect the eclectic theology of the *Islamic Review*. Some years ago it was the *Review of Religions* and the doctrines of Mirza Ahmed Kadiani that attracted them. No Malay ever exchanges Islam for Christianity, and round Islam centre all his racial ambitions. But material and political progress have a greater interest for him to-day than theology or metaphysics.



OLD MALAY WOMAN.

What has Islam done for the material and political progress of Malaysia? In Java it destroyed a powerful kingdom and a great art. It made theology the one end of study. It is probable that it lowered the status which the Malay woman had enjoyed under matriarchy. But it found the Malay peasant "a frog under a coconut shell" and left him a citizen of the world. The customary law of the tribe it helped to broaden into the law of the State. Its

missionaries translated a new literature into the vernacular and induced in an illiterate people a passion for knowledge. It saved the Malay from the evils of drink. In place of Hindu theories of caste and kingship it set up the ideal, at any rate, of a democratic theocracy.

Although Malays are Shafeites, yet before British ascendancy the chiefs stuck to their customary law in matters of contract, sale, slave-right, land tenure and succession to real property. In Negri Sembilan, land tenure, contract and succession to property are still governed mainly by the matriarchal law of Minangkabau, which is found in the Peninsula only in that State and in the districts of Naning and Temerloh, formerly included in that State: it may be remarked that it resembles closely the matriarchal systems of the Khasis of Assam and the Moïs of Indo-China. In all States customary law still controls succession to titles. Muslim law is limited to marriage and divorce and the legitimacy of children. British criminal law reigns supreme, and British civil law is followed except when customary or Muslim law is directly opposed to it.

CHAPTER XII

MALAY ARTS AND CRAFTS

THE indigenous art of the Malay survives in basketry, in bamboo musical instruments, in certain primitive motifs in weaving, carving and the damascene of weapons.

BASKETRY AND MAT-MAKING.—“In no other part of the world are such accommodating plants for basket-work to be found as in Malaysia.” From time immemorial basketry and mat-making must have been part of the Malay’s daily occupation. Probably Indian influence taught him to build in wood, but even to-day his house is often made of bamboo, split, dried and wattled, or of wicker-work of palm-leaf stalks. His fishing traps are contrived of strips of split bamboo laced parallel. If he catches an animal, he gets a large bamboo, splits it open down to a joint, splays out the segments fanwise, interlaces them with cane, pops his animal inside and laces up the opening. To carry fruits and vegetables, he uses a wonderfully balanced conical back-basket; for smaller objects an open-work bag, with a rattan slip-cord to close its mouth. He hangs his plates in a rack of looped cane-work and has a stand of similar stuff for his cooking pots. “Fine mats” are mentioned among exports from Johore by Chinese chroniclers 300 years ago. But the basketry of the Peninsula is poor compared with that of the Dayaks of Borneo and the Bataks of Sumatra. Yet of Malay indigenous arts the only work that has reached high perfection in the Peninsula is the “mad-weave” of Malacca: the women make their baskets in nests of five—square, long, oval or triangular—each basket fitting into another a size larger than itself; also they make them in tiers, the lid of the lower basket forming the bottom of the one above. It takes a month to finish a nest of poor baskets, and three or four months’ daily work to complete a fine set. Under European influence the Malays of Port Dickson made Panama hats of fibre, but an order for 20,000 frightened the industry to death.

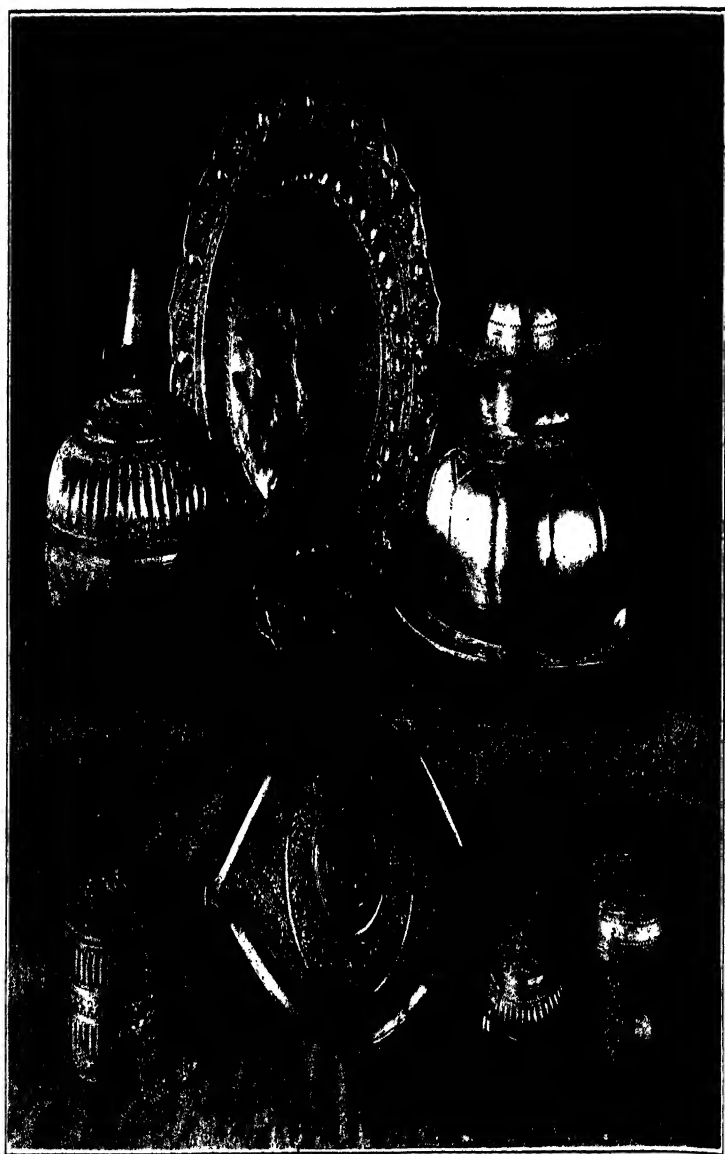
POTTERY.—The potter’s wheel was not used during the Stone and Bronze Ages, and Malay pottery is interesting especially be-

cause the wheel is still unknown, although it has been familiar in India and China from very early times. Technically Malay ware is poor, but it can show some graceful shapes, jugs and jars for the most part being modelled on the gourd and the coconut shell. In Perak, two villages on the river, Sayong and Pulau Tiga, were noted for this industry. At Kuala Tembeling in Pahang are produced vessels spouted and marked rather by the short arc than by the rounded almost circular curve, two characteristics pointing to Chinese influence. In Malacca and Negri Sembilan are found heavy black vessels stamped with deep patterning like florid wood-carving.

WEAVING.—The Malay, Javanese and Cambodian looms are provided with a reed, and their characteristic is a flat warp beam combined with the rudiments of a loom frame. The weaving of the Peninsula cannot compare with that of Palembang and Batu Bara in Sumatra. The industry has nearly died in the prosperous Western States. A little work is done at Pekan in Pahang under Sumatran influence. But the only patterns peculiar to the Peninsula are to be sought in the striped and plaid clothes of Kelantan and the tie and-dye work of Trengganu. Tie-and-dye work is done in Sumatra, too, and owes its origin to imitation of such Indian fabrics as the “chindes” of Surati. The use of gold and silver thread in weaving also comes from India. A beautiful, though impermanent, fabric is made by impressing gold-leaf by means of patterned wooden stamps on to polished or calendered cloth, a work done especially by the Bugis of Selangor.

METAL-WORK.—All Malay metal-work—brass, copper, silver and gold—bears evidence of Indian influence. This is most obvious in brass trays, hanging lamps, water-kettles, cuspidores and censers. But even in these articles the Malay craftsman has kept a style of his own, avoiding the excessive adornment that mars so much Indian and Sinhalese work. There is, however, no ware in brass or copper peculiar to the Peninsula; it is all identical with Sumatran types. A white metal of tin mixed with copper and antimony is worked in Trengganu.

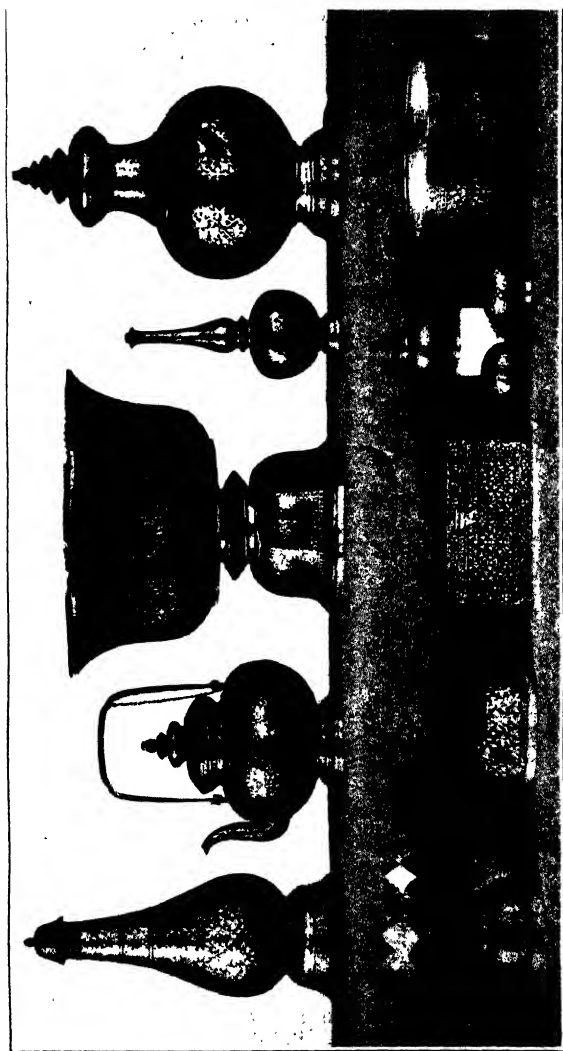
Several foliated patterns in Malay gold and silver work may be traced in the carved frames of the panels on Boro-Budur, the great Buddhist memorial in Java. A lotus flower is common on waist-buckles. An ornamentation with prominent gadroons “is the same as the lotus pattern found on the base of Buddhist idols,” and is called by Malays the pine-apple pattern. Is it possible that this pre-Islamic art with its Indian traits dates back to the



A PLATE AND WATER-VESSEL SET FROM RIAU; A LIDDED BOWL, GOLD WAIST-BUCKLE AND
THREE CASKETS FROM PERAK.

great Malay kingdom, Buddhist Palembang? Of course, in the north of the Peninsula later Siamese influence may have left its mark. Perak is the home of the most distinctive silver-ware in the Peninsula, well represented by illustrations in Swettenham's "British Malaya" and Ling Roth's "Oriental Silverwork." Lotus flowers adorn the tops of all Perak caskets, and peculiar to Perak are large lidded bowls, whose covers are topped with jingling flowers of cut silver petals, reminiscent of the tops of Buddhist *wats*. The little *repoussé* work of Negri Sembilan is of Sumatran type, the people of that State being colonists from Minangkabau. The silver of Pahang and Johore is of the Riau school, and includes a very handsome shape modelled after the clay round-bottomed water-vessel. Islam, which destroyed the Hindu art of Java, has done a service to the art of the Malay silversmith in restricting him to conventional floral and foliated patterns, unspoilt by bizarre beasts and birds and naturalistic flowers. Common forms are the lotus, the clovehead, a longitudinal ribbed (*bélimbing*) pattern, a chevron border called "the bamboo shots." Chinese art has hardly touched Malay ware, but it may be detected in a key border and in trellis and diaper designs. Malay silver shows old European influence in round and octagonal watch-shaped boxes with a type of tracery found on seventeenth-century watches, in hinges and feet and in saucer and plate shapes. Except in Negri Sembilan, where Minangkabau models are followed, all old-gold-work, buckles, anklets, creese-sheaths copied the Hinduised style of Java, and most of the articles bear Javanese names. Filigree-work, however, is commoner in Sumatra than in Java. In Negri Sembilan the Sumatran ware, *jadam*, used to be popular for waist-buckles. It is made by filling with black sulphide a silver pattern obtained by the *repoussé* method. The blue-black enamel forms the body of the design; the silver, veins in a blue-black ground. The most ornate of all Peninsular metal-work is the niello (*chutam*), which is said to have been made in Ligor and Kedah from the twelfth century A.D. The ware is *repoussé* silver, the hollows filled with a black sulphide, and the high pattern left as silver or gilded: in some examples both gilding and the natural colour of the silver are employed. A favourite figure on old bowls is Hanuman, the Monkey-God, but most of the utensils are covered with a delicate formal leafy tracery wherein are sometimes introduced snakes, squirrel and deer. To-day, beautiful as the art is, it is moribund or dead.

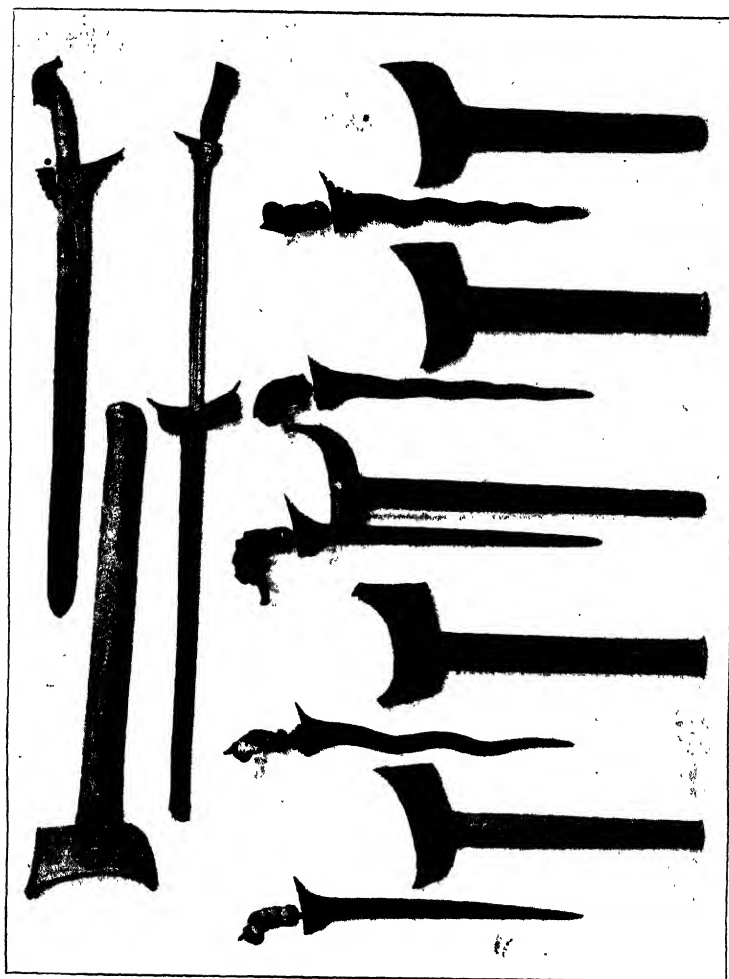
As Swettenham remarks: " All this work was done under conditions which no longer prevail; it was done under a feudal system, where the workman and his family lived under the protection and



CHUTANI WARE.

at the expense of his chief, with no anxiety as to his own needs and no pressure to hurry on the work. He was supplied with the metals, the tools, everything he wanted, and a capable worker was

held in high esteem. The smiths were notably makers of spears, creeses, all sorts of daggers, a very well-balanced and highly tempered chopper of various patterns, spurs for fighting cocks, and a

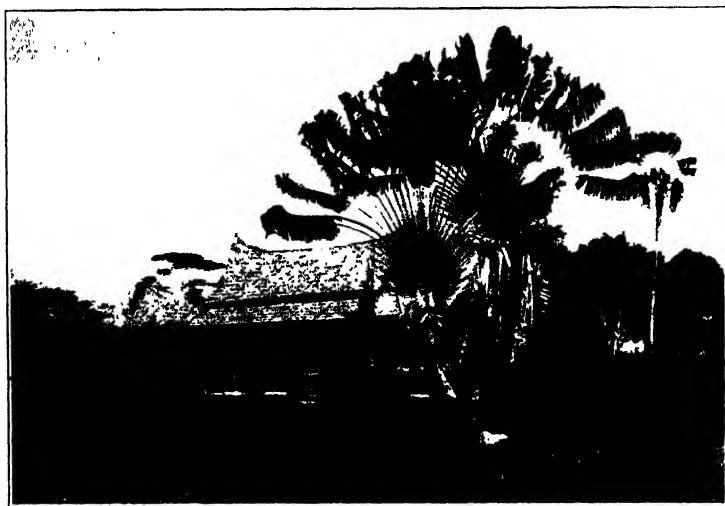


MALAY WEAPONS.

curious kind of scissor used for slicing the betel-nut. All these were made in Perak."

WEAPONS.—"The cursed Malayan creese" has been famous for centuries. The model for its blade has been sought by anthropologists in the horns of a "butting animal and again in a dragon

copied by primitive snake-worshippers. There was wisdom in Polonius' indifferent acquiescence in Hamlet's cloud: "Like a camel indeed; backed like a weasel; very like a whale." What is pretty certain is that the creese came from some Indian weapon by way of Java, and that its hilt represents the Garuda, whereon Vishnu rides. Shortly, the blade is made of welding alternate laminations of iron and steel. The most esteemed weapons come from Celebes, and the most artistic workmanship will be found in the creeses of Java and Bali. Beside these finer blades the creese



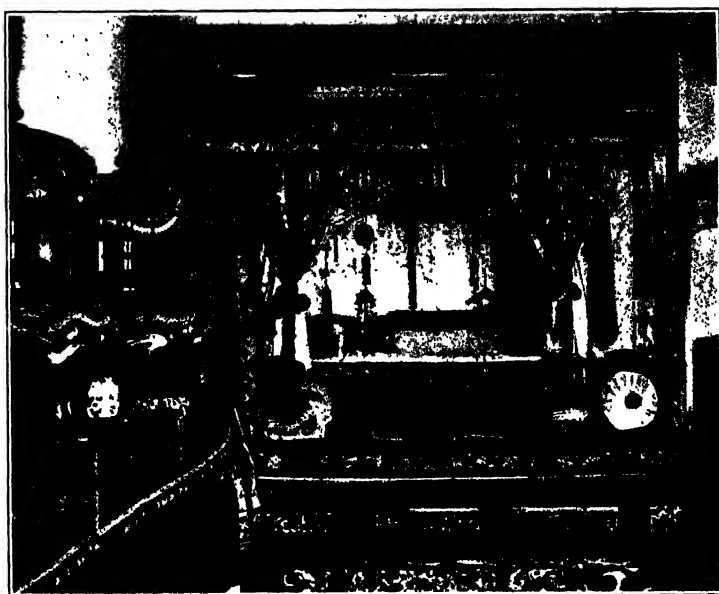
A MALAY HOUSE, SEREMBAN.

made in the Peninsula is a cheap, clumsy knife. One pattern of straight creese is called "the black fighting-cock with white markings," another trowel-like "the cake spoon," another plain with sinister waves "the deadly vampire"; the patterns of damasking are called "the grasshopper's legs," "the bean," "the opening blossom," "the mountain" and so on. The only creese peculiar to the Peninsula is the Patani weapon, its sheath of Javanese type but longer than the blade, so that it can be kicked up by the heel from its place at the back of the thigh and drawn over the shoulder; its hilt called "the kingfisher's head," but representing really a long-nosed demon head with teeth and tusks. The long, straight "execution" creese comes from Sumatra and is common in Negri Sembilan. The "pepper-crusher," a short, slightly

curved dagger, is also Sumatran; Rembau in Negri Sembilan boasts of a peculiar type of hilt for this weapon. The sword is foreign to the Malays.

WOOD-CARVING.—Some wood-carving, bearing the foliated patterns found in Malay silver-work, is practised in Negri Sembilan and Naning, and a fine specimen of an old carved house from Linggi is preserved at Seremban in the Residency grounds.

EMBROIDERY.—Malay embroidery on silk and velvet flourishes especially in Perak. Its patterning consists in conventional



MALAY EMBROIDERY ON BRIDAL DAIS.

foliated scrolls, of complicated elaboration and often covering a whole mat. Pillows, sleeping-mats, slippers are favourite articles. There is abundant testimony to Indian and Chinese influence. Emperors of China used to send to the rulers of old Malacca "velvets, silks and gauzes embroidered with gold," and "suits of clothes embroidered with dragons and with sequins." The word for silk is Sanskrit.

LACE.—A little inferior lace with a Portuguese name is made in Malacca.

CHAPTER XIII

CHINESE—INDIANS—EURASIANS—OTHERS

CHINESE (pop. 1,173,354).—Chinese intercourse with the Malay Peninsula is very old. Chinese charts, said to date back 500 years, contain the first recorded mention of Penang. Ma Huan, a Chinese Muslim, accompanied a celebrated Chinese envoy, Sam-po (or Cheng-Ho), to Malacca, and has left an account of that place written in 1416. As the chapter on Malacca relates, the Permaisura, its first ruler, and his two successors paid several visits to China to secure recognition from the Emperor. "In the year 1409 the Imperial envoy, Cheng-Ho, brought an order from the Emperor, and gave to the chief of Malacca two silver seals, a cap, a girdle and a long robe; he erected a stone and raised the place to a city. From this time the Siamese did not venture to molest it any more, and the chief of the country, having become King by the Imperial favour, went with his wife to the Court of China, to present his thanks and to bring a tribute of products of his country. The Emperor sent him home in a Chinese ship. The place is visited by Chinese merchant vessels." China also gave the rulers of Malacca the yellow umbrella of Malay royalty. In 1537 the Chinese chronicles relate of Malacca: "When the Chinese who live here eat pork, the others are indignant and say it is filthy." And about the same time it is recorded: "Men and women wear their hair in a knot; their body is very dark, but some are of a lighter colour, being descendants of Chinese." An eighteenth-century history of Perak tells how Chinese boxers and snake-charmers took part in royal festivities on the Perak river with Chinese music that sounded to the Malays "like the noise of frogs in a marsh after a fall of rain." In the same century Chinese soldiers were employed by the Dutch at Malacca.

"The first immigrants," says Dr. Shellabear in his study of the Malacca Baba, "were probably from Amoy, for nearly all the words of Chinese origin which have come into the Malay language approach more closely to the sounds of Hokkien than to those of any other

dialect, and the Babas of all the old families claim to be Hokkiens. There is also very little doubt that the Chinese who came in the early days were males, that they married Malay women but brought up their children as Chinese." Owing to Islam "intermarriage between the Babas and the Malays has entirely ceased, and probably for hundreds of years past the Babas have married exclusively among their own people. . . . An immigrant comes from China, and as soon as he has saved up enough money he opens a small shop in a Malay village, where he soon learns to make himself understood in the Malay language. When he is able to support a



HALF-MALAY HALF-CHINESE GIRL.

wife, he looks out for a girl from some of the poorer Baba families or perhaps a daughter of one of the numerous concubines to be found in the houses of the wealthy. Baba women of this class are to be found to-day in all the villages of Malacca; their children are Babas pure and simple, and often know nothing of the Chinese language." But Baba Malay differs from the language of the Malays, because it uses a number of Chinese words, mispronounces many Malay words, is ignorant of others and employs a wonderful "pidgin" idiom. Unacquainted with the written literature of the Malay, the Baba greatly appreciates the popular quatrains sung at dances and

festivals, and is fond of composing them himself. Old-world Malacca especially is the home of the Baba Chinese, but there are



C. Johns

WANGKANG OR MODEL SHIP BURNT WITH OFFERINGS TO SPIRITS BY
CHINESE BABAS OF MALACCA ONCE EVERY TEN YEARS.

well-known families in Penang and Singapore also, and their descendants have spread to the Malay States. Not only is Baba

Malay the language of the Straits-born Chinese, the best educated and wealthiest and most intelligent section of the Chinese community, but it is the language of market and shop and counting-house throughout the Straits and Federated Malay States.

From the middle of the nineteenth century first tin and then rubber have caused Chinese to pour into the Peninsula. The great sources of the Chinese population in Malaya are the southern maritime provinces of Canton and Fukkien (Kwang Tung and Hokkien) and the island of Hainan, parts of China where there is not only a diversity of languages but also a large number of dialects of each of those languages. There are five tribes to which all but a small percentage of Chinese in British Malaya belong—namely, Hokkiens, Cantonese, Khehs, Tie Chius and Hailams. The total population of these Chinese tribes is given in the following table:

	<i>Cantonese.</i>		<i>Hokkien.</i>		<i>Kheh.</i>		<i>Tie Chiu.</i>		<i>Hailam.</i>	
	1911.	1921.	1911.	1921.	1911.	1921.	1911.	1921.	1911.	1921.
Straits Settlements }	74,007	115,707	155,760	218,691	30,020	37,277	55,950	75,004	25,109	28,455
Federated Malay States }	142,425	178,208	90,137	105,435	143,648	152,188	21,890	20,458	23,853	22,558
Protected States }	—	38,128	—	55,869	—	28,385	—	34,660	—	17,295
British Malaya }	—	332,043	—	379,995	—	217,850	—	130,122	—	68,308

The Cantonese form a high proportion of the mining population and many of them are engaged in planting. In the Federated Malay States they outnumber the Hokkiens, who in the Straits Settlements, Johore and Kelantan are the most numerous of the Chinese tribes. The Hokkiens, while following agricultural pursuits in the country districts, form the bulk of the trading and shop-keeping classes in the towns. Along with the Cantonese, the Khehs supply the labour on the tin-mines of the Peninsula, but owing to the introduction of labour-saving machinery a large number have turned to agriculture and are employed on rubber estates. Many of the Tie Chius are fishermen, and over two-fifths of the total number of this tribe are found in Singapore; others are employed as coolies on estates. In the towns most Hailams are domestic servants or shopkeepers, but in rural districts, especially in Malacca,

Negri Sembilan and Johore, there are many small Hailam rubber estates of 20 to 200 acres. The custom that forbids Hailams to let their women emigrate from China is rigidly observed, and the women returned as Hailams at the census are either women of other Chinese tribes following Hailams or the female children of a Hailam father and a Cantonese or Tie Chiu mother.

Up to the beginning of the present century the ordinary Chinese immigrant had no desire to settle permanently in Malaya. If married, he left his wife and family in China and returned there as soon as he had acquired a competence in this tropical Eldorado; if unmarried, he had no chance to find a wife here. In Burma,



CHINESE HOUSES BESIDE A RIVER.

Indo-China and Siam the Chinese, who are thrifty, fond of children, and good husbands, intermarry with the women of the country, but in Malaya Islam is an almost insuperable bar. It is calculated that a million Chinese returned home in the last decade. Only in recent years has the proportion of female immigrants appreciably increased. Famine and disturbances in South China are largely responsible for this change, and better conditions there combined with commercial depression in Malaya may curtail it, but even then the census of 1931 should show a population of Malaya-born Chinese almost equal to the immigrants. In 1921 there were enumerated 258,523 locally born Chinese as against 916,254 born in China or elsewhere. Most of the local Chinese are traders and shop-

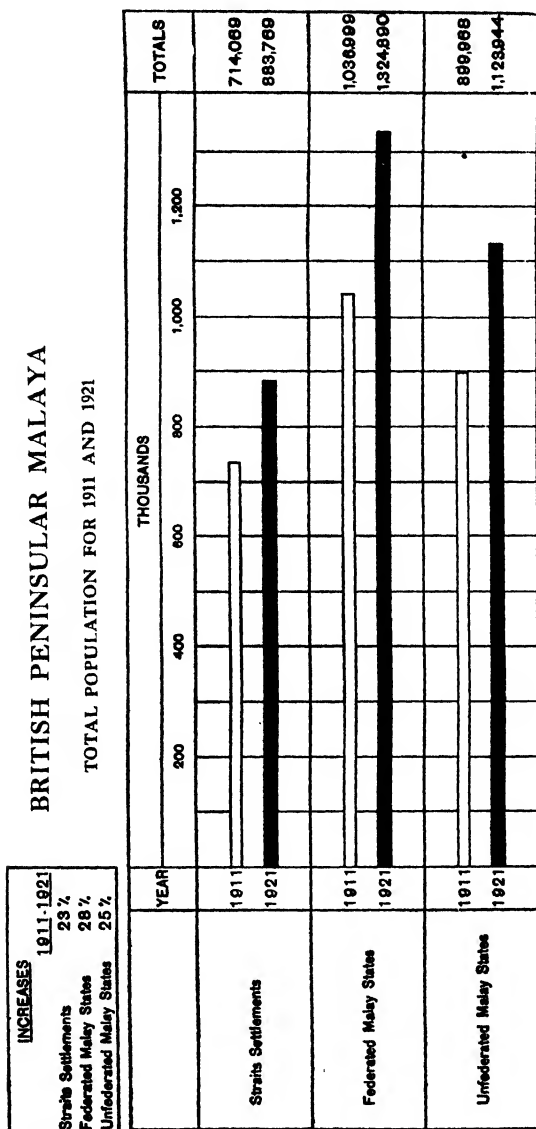
keepers, and are therefore proportionately more numerous in towns.

The Chinese are pre-eminently the business people of the Peninsula. The coolie is cheerful, industrious, frugal and law-abiding; the shopkeeper honest and enterprising; the miner and planter shrewd, loath to let money rust, hospitable, generous, public-spirited. The wealth of the community is great. Chinese own most of the tin-mines, many rubber estates both large and small, coastal steamers, and house property in every town and village. Without the energy and brains of the Chinese population British Malaya would not have become what it is to-day.

INDIANS (pop. 471,628).—The chapters on the language, beliefs and literature of the Malay show how much India has influenced him both before and after he became a Muslim. The Malay Court vocabulary and Court ceremonies; the coronation oath recited first, the "Malay Annals" say, by a man in a huge turban, Bhat (an Indian name for "bard and genealogist"); the Malay medicine-man's Hindu metaphysics and Sufi mysticism; the first missionaries of Islam to Malaya—all these came from India. Chola kings claim to have ravaged the coast of the Malay Peninsula in the eleventh century. There was a Tamil quarter in old Malacca; Indian warriors and jockeys and mahouts were in the employ of the Malacca Sultans; Chulia merchants from the Coromandel Coast did a large trade in stuffs and clothing. In 1560 the first Bishop of Malacca, Dom Georges de Santa Lucia, converted many "Kling idolaters" by a miracle: after the procession of the Feast of the Assumption of Our Lady, the protectress of the fortress, he solemnly excommunicated the forest-dwelling Benuas, who never again entered town or village in the shape of tigers to kill women and children. In the eighteenth-century history of Perak, referred to before, a Tamil, Tambi Kechil, who had one wife in Perak and another in India, got a title from the Sultan for going to India and returning with a trader who bought elephants; and there is mention of one Siti Sara, daughter of a Tamil Lebai Hanap, whom a Perak chief wanted to marry. Along with Chinese boxers and snake-charmers, "Klings" dressed as demons danced in those days at Perak royal festivals. About A.D. 1765 a Tamil from Malacca was employed as interpreter by the Dutch factory at Tanjong Putus.

A century ago there were many more Indians in the Straits Settlements than in the Malay States. Bengkulen, while a British settlement, was a convict station for the East India Company.

Later Singapore, Malacca and Penang were "the Sydneys of India," first under the East India Company and then under the Govern-



ment of India down to 1873. Thugs and Dacoits were sent from Bengal, and felons from all parts of the Madras and Bombay Presi-

dencies. In 1857 there were 2,139 convicts from India, Ceylon and Burma in the Singapore gaol. St. Andrew's Cathedral, Government House and many roads and public buildings were constructed by Indian convict labour. Owing to a very generous ticket-of-leave system many of these convicts merged, especially in Penang, into the local population. Penang Malay contains more Tamil words than any other Malay dialect in the Peninsula. The number of *Jawi Pëkan* or half-Indian half-Malay persons is large, and members of the community are clever and industrious. In Penang alone the influence of Indian Muslims has led to the celebration of the Hassan-Hussain festival and to a dance called the Boria, practised during the month of Muharram.

Ever since British protection of the Malay States began it has been the aim of the Government to induce Indian labour to immigrate for work on roads, railways and estates. Selangor, the first State where rubber was cultivated and where coffee-planters had established a connection with Madras in the last century, has the largest number (116,595) of Tamils. Next comes Perak. Between them those two States contain about two-thirds of the total Indian population of the Peninsula. Local usage designates all Southern Indians, Tamils, Telugus and Malayalis as "Klings" after the old kingdom of Kalinga, which covered the Northern Circars or territory to the north of the Coromandel coast and survives in the name of the port, Calingapatam. Tamils are far more numerous than the rest of the natives of India taken together, the bulk of them coolies on rubber estates and in the public works and railway departments. The average stay of Tamil labour in Malaya is reckoned to be not more than three years. But Tamil contractors, shopkeepers, and clerks often settle permanently. The phrase "Kling Islam" refers to the Labbai and Marakkayar Muslims of the Madras Coast who come to the Straits to trade.

All Northern Indians—Punjabis, Bengalis, Afghans, Pathans—are dubbed by Malay usage "Bengalis." Punjabis (15,504) represent the bulk of these northern races, Sikh and Muslim Jats having been attracted to Malaya either to join the now disbanded "Malay States Guides" or the Police, or to become watchmen on estates and tin-mines and at go-downs; many have brought their women-folk and settled to money-lending, bullock-cart driving and so on. The Bengali proper (5,074) is rarely met except in the larger towns, where a few are employed as clerks, artisans and shopkeepers.

No other Indian races have immigrated in appreciable numbers. Less than a thousand Pathans are scattered over the Peninsula as watchmen, bullock-cart drivers and policemen. There are just over two thousand Sinhalese—jewellers, carpenters, barbers and coolies. There are a very few Gujaratis, Mahrattas, Gurkhas and Burmese.

SIAMESE (pop. 18,178).—Kedah, Perlis and Kelantan were for centuries under the suzerainty of Siam. The Siamese population (15,998) in these States is settled and there are few recent immigrants. The descendants of Siamese and Malays are known as Samsams.

EURASIANS (pop. 12,644).—The local Eurasian of the Peninsula owes his origin to intermarriage or irregular unions between Western men and Eastern women. Three-quarters of the Eurasian population are in the Straits Settlements. The Portuguese “married man” formed a distinct class in Malacca under Portuguese rule; it was their duty to populate it. Godinho de Eredia records how at the beginning of the seventeenth century there were in the fortress, “exclusive of the garrison, 300 married men with their families.” The descendants of those “married men” are the Portuguese Eurasians of modern Malacca, who still bear names great in history and speak a Portuguese *patois*. The well-to-do members of the community are planters, clerks, schoolmasters; the poor, humble fisher-folk. All are Catholics. The great missionary to the Portuguese Eurasian was St. Francis Xavier. In 1546 he wrote to John III. of Portugal: “The native wives of the married and the half-caste sons and daughters are content to say that they are Portuguese legally and not religiously. These native women, this means, acknowledge they are Portuguese as distinct from subjects of the native princes, but do not therefore consider themselves as Christians. The cause is the lack of preachers to teach the religion of Christ.” There are also many well-known Dutch Eurasians in Malacca, the relic of the Dutch ascendancy. To Penang and Singapore Eurasians came only after the British had changed swamp and forest into ports. Some of them are descendants of Indian traders, others of writers and captains in the East India Company transferred from Bengkulen; others again are members of the Malacca Eurasian families.

JAPANESE (pop. 6,989).—The war, which stopped the import of German and Austrian goods and hampered British trade, gave Japanese merchants an opportunity, though the animosity of the

Chinese restricted their scope. Further, a number of Japanese took up land for rubber planting especially in Johore, though no attempt to introduce Japanese coolie labour has succeeded.

ARABS (pop. 4,316).—In Singapore nearly all the Arab community are true Arabs, though some are offshoots of Indian Arab houses; they are very wealthy and with the Jews are the largest owners of house property in the town. From the time of the coming of Islam there has been constant intercourse with Arabs, first from India and later from the Hadramaut. The Malays have a great respect for Sayids, the lineal descendants of the Prophet, and the title confers a social distinction approaching that of a Raja. Many of the Sayid houses of the Peninsula are old. An Arab settlement was started at Kuala Pahang about 140 years ago. In the seventeenth and eighteenth centuries Sayids of the great Hadramaut house, descendants of 'Alawi, grandson of Ahmad bin Isa al-Mohajir, gained enormous influence at the Perak Court and usurped several great State offices. One married the sister of Perak's most famous ruler and became the father of a Sultan. Another married a daughter of the Raja of Siak, and from their union are descended the rulers of that Sumatran kingdom. Several were accounted saints. One of the family went to Trengganu, but a descendant returned and married a daughter of the Perak royal house, their descendants being the Sayids of Chendriang in Batang Padang. There is a colony of these great Perak Sayids at Chagar Galah on the Perak river. Though all old Sayid families have intermarried with Malay women, the Arab cast of countenance is often remarkably preserved. Where the community has grown, intermarriage between Sayids and Sharifahs only is respected. The younger generations have no knowledge of Arabic, but the pride of descent remains.

JEWS (pop. 703).—Nearly all the Jews are resident in Singapore.

FILIPINOS (pop. 405).—Most of the people from the Philippines are bandsmen and musicians.

CHAPTER XIV

HISTORY

1.—THE COMING OF THE SUMATRAN MALAYS

How did the Proto-Malay race become the civilised people who now inhabit the Malay Peninsula, Sumatra, Borneo and other islands? The immigrants from the mainland of Asia must have intermarried with other tribes in the islands of the Archipelago, and later with Indians and Arabs. In the beginning of the Christian era the Indian religion and caste system and government by rajas had been introduced into Sumatra and Java; and Indian influence spread in a less degree throughout the Archipelago even as far as the Philippines and Madagascar.

Malay tradition relates that the cradle of the race was Palembang in the south of Sumatra. The honorific name for Palembang was Sri Vijaya, which Chinese traders corrupted to Shi-li-fo-she and San-bo-tsai, and Arabs to Sarbaza. Its rulers were styled Maharaja. At the end of the seventh century a Chinese Buddhist pilgrim, I-Tsing, visited the port, and in his time its Maharaja annexed the "Malayu" country, almost certainly the region of Jambi. The earliest known specimen of the Malay language or some closely cognate dialect, an inscription in the Venggi script of Southern India, dated A.D. 686 and found at Kota Kapur in Bangka, records an attack on Java by the forces of Sri Vijaya, a kingdom that in A.D. 778 built the fine Buddhist temple of Kalasan in Central Java. Another Sanskrit inscription, discovered at Vieng Sa in Lower Siam (about 9° N. lat.), records the erection of Buddhist buildings in A.D. 775 by order of the Maharaja of Sri Vijaya, "of the dynasty of the king of the mountains." From the middle of the ninth century Ibn Khordadzbeh and other Arab writers begin to speak of the kingdom of the Maharaja, which included Kilah on the west coast of the Malay Peninsula (perhaps Kedah), a port famous for tin and bamboo, whose people were Buddhists. Again there is a monument, dated A.D. 1005, in Tamil and Sanskrit recording the grant of a village to a Buddhist temple at Negapatam,

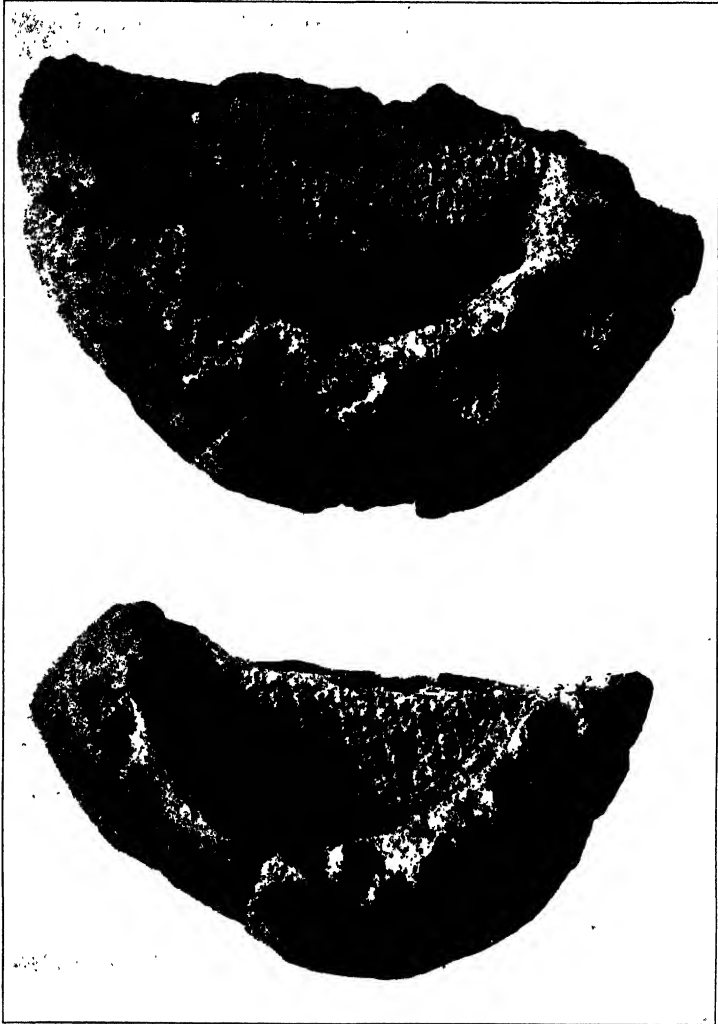
built by two rulers of Palembang, father and son. In the Sanskrit inscription the names of the two rulers are given, and the second is styled "King of Kataha and Srivishaya": their identity is corroborated by two entries in the Chinese annals of the Sung dynasty, which give also their names and mention embassies from them to China in A.D. 1003 and 1008. In the Tamil text Kataha is called Kadaram and there is little doubt it is Kedah. A Tanjore inscription of 1030 commemorates the conquests overseas of Rajendracola I., the capture of the King of Kadaram, the conquest of Srivijaya, of Malayur (or Jambi), of Ilangacogam or Langkasuka, and of several other places. A few years later the Maharaja of Srivijaya persuaded the Chinese Court that the Chola king was his vassal. Chao Ju Kua, writing about 1225, tells how Palembang claimed suzerainty over Kelantan, Pahang, Trengganu, Langkasuka and Ceylon.

All this evidence, most of which has been traced recently, would suggest that the rulers of Palembang of the dynasty of the mountain, probably Si-Guntang Mahameru of the "Malay Annals," were greater even than Malay tradition boasts; that Palembang introduced Mahayana Buddhism into Java, that it dominated the middle of that island for a century, the Sunda Straits till A.D. 1200 and the Malay Peninsula.

In Kedah and Province Wellesley there have been found Sanskrit inscriptions in a Southern Indian script going back to A.D. 400, and so coeval with the earliest monuments in Java; and again inscribed clay tablets in a cave in Kedah, written in the Northern Indian script of the tenth century. Legend, too, tells of a powerful kingdom at Bruas on the coast of Perak, with a town so big it took a cat three months to do the circuit of the roofs: it may be referred to in the Tanjore inscription, but all we know of it definitely is that about A.D. 1500 its ruler did homage to the Sultan of Malacca in return for help against Manjong, a petty rival village. But already in the thirteenth century, according to Mon and Chinese records, the Malays in the north of the Peninsula were falling back before the growing power of the modern Siamese.

The history of the southern part of the Peninsula has been considered even more vague. Quite lately a new study has sought to identify ancient Singapore with I-Tsing's "Mo-ho-hsin," the "Hasin" or "Salt-Sea State" of an eleventh-century Javanese inscription, with Ibn Khordadzhbeh's "Schalahit" (*Selat*), and of course with the "Tasik" or "Tumasik" of the fourteenth century.

Again, hitherto, Langkasuka, whose name survives in a tributary of the Perak river and in northern folklore, has always been taken to be an old name for Kedah, as the "Kedah Annals" say, but now



CLAY TABLETS FROM A KEDAH CAVE.

it is suggested that it was I-Tsing's "Langgasu," the "Wura-wari" of the tenth century, the "Ujong Galoh" of a Javanese inscription of that century and the "Ganggayu" of the fifteenth century, this

last word meaning, according to the *Sĕjarah Mĕlayu*, a "treasure-house of jewels"; and it is surmised that the Arabic *ĵauhar* took the place of the Javanese *galoh*, both words meaning "jewel," and that modern Johore was once the Lanka of the Ramayana, famous for its precious stones, and the Golden Chersonese of Ptolemy. It is very doubtful how many of these identifications will stand: that of Langkasuka with Johore is almost certain to be rejected.

It is supposed that the expedition of Kertanagara of Tumapel against "Malayu" (or Jambi) in 1275 fell also on "Hasin," and destroyed it so utterly that Marco Polo in 1292 heard only of Bintan. Some of the inhabitants must have fled to Bintan, some probably to Muar. The place of "Hasin" was soon taken by "Tumasik," this Javanese name being due perhaps to fugitives from Tumapel, whose long expedition against "Malayu" had left it to be absorbed in 1293 by Majapahit. Half a century later Majapahit destroyed Tumasik. The exact date is unknown. According to a Javanese history, the "Pararaton," Patih Gajah Mada, most famous of Majapahit's ministers, took an oath in A.D. 1338 that ten countries, including Palembang, Pahang and Tumasik, should be subdued. Composed in 1365, the "Nagarakretagama" mentions, among other places, Jambi, Palembang, Minangkabau, Pahang, Ujong Medini (=Ujong Tanah), Langkasuka, Kelantan, Trengganu, Muar, Dungun (in Trengganu), Tumasik, Sang Yang Ujong (Cape Rachado), Klang, Kedah and Jerai (in Kedah) as being all subject to Majapahit. Possibly the monument at the mouth of the Singapore river, which was blown up by the Public Works Department, commemorated this conquest about 1360: the fragment now in Raffles' Museum is in Majapahit characters of the fourteenth century, but awaits further study. This destruction of ancient Singapore drove more Malay fugitives towards Muar and Malacca.

2.—MALACCA AND MUHAMMADANISM

The earliest reference to Malacca may date back to A.D. 1328, when according to the "Pararaton" there was a prisoner in Majapahit, the son of a *ksatriya* of "Pamelekahan" or, perhaps, "Malacca lands," captured at the fall of Jambi. The next reference is in Siamese laws of 1360, where "Ujong Tanah, Malaka, Malayu and Worawari" are cited as tributary to Siam. Early fifteenth-century Chinese records say "its old name was Five Islets," and "formerly it was

not designated a kingdom." It is hardly likely that they are correct in implying that at the beginning of the fifteenth century it was an insignificant place belonging to Siam, then for a decade became a prosperous Hindu kingdom under Permaisura, and, lastly, converted to Islam in 1414, suddenly acquired empire. History does not turn a village of aboriginal fishermen into a kingdom in a decade, and the earlier references are against this version. Far more probably Barros, first (A.D. 1553) and most reliable of Portuguese chroniclers, and the "Malay Annals" are right in stating that Malacca was founded as early as the middle of the thirteenth century, but did not rise to importance till more than a hundred years



C. Ishii.

MALACCA RIVER.

later when a crowd of fugitives arrived after the sack of Singapore. Again, down to the death of Hayam Wuruk, the great Majapahit conqueror, in A.D. 1389, the Straits of Malacca must assuredly have been dominated by Javanese fleets, and only after that date can have begun the Siamese suzerainty whereof Chinese annals and Siamese laws speak.

The Chinese records give definite particulars of Malacca when Chinese influence began. A Chinese imperial mission was sent there in 1403 to "bring presents of silk woven with golden flowers, curtains adorned with gold and other things" to its chief, Permaisura, who then paid an annual tribute of forty taels of gold to

Siam. Permaisura sent tribute to the Emperor of China, and in 1409 was given a silver seal, a cap and official robes, and raised to the rank of a royal vassal. He and his two successors with their wives, sons and ministers made several voyages to China, and the Emperor's officers conducted the investiture of each new ruler. The people of Malacca then got their livelihood by fishing and mining tin, and there were godowns for the use of the Chinese junks, which brought porcelain, beads and taffetas. Products of the country were resin (*damar*), camphor and ebony.

The title of the Permaisura and the religion of his people were Hindu. The dead were not buried in his time but burnt. To this day there may be seen in Malacca a carved stone, *Makara*, the Hindu marine monster, evolved from the crocodile: perhaps it was brought later from Java by some Dutch official, but quite likely it is a relic of the time when the Malays of Malacca professed the Hindu religion. Then about 1409, a hundred years before the coming of the Portuguese, the adoption of Islam, which was wrecking the Hindu kingdoms of the Archipelago, consolidated this little principality of many races—Malays, Javanese, Burmese, Chams, Indians, Arabs and Chinese.

Visiting Sumatra in A.D. 1292 Marco Polo found Islam at the little port of Perlak. The first Malay ruler to embrace the new faith, Sultan Maliku's-Salleh of Pasai, another small Sumatran port, died in 1297; and tombs there of Cambay workmanship show that the first missionaries came from India: one of them, indeed, was the son of a man of the house of the Abbasides, whose father was a pupil of Ibn Batutah at Delhi. D'Albuquerque and the "Malay Annals" relate how an early ruler of Malacca married a princess of Pasai, which had then ousted Kedah from its pride of place as a trading centre. Barbosa ascribes this change of faith in Malacca to the presence of many rich Indian Muslim traders, who converted the Malays and induced them to throw off the yoke of Siam. Malacca became the centre of Malayan trade and Muhammadanism. Its sultans grew rich on harbour dues levied on the foreign ships visiting the port. Their sway extended along the coast from Singapore to the Dindings. So powerful did they wax that they furnished rulers for Trengganu and Pahang in the heyday of their power and for Johore and Lingga after their fall, conquered Pahang, and crossing the sea subdued Kampar and Indragiri in Sumatra. But prosperity spoilt the descendants of the early industrious trader chiefs, making them corrupt, dissolute tyrants.

The "Malay Annals" give a spirited picture of the time. One princeling stabbed to death his playmate, the son of the Prime Minister, because accidentally the boy had knocked off his hat at football. A royal dandy was creesed in his sleep by the Sultan's orders because he had enfeoffed himself to popularity. An aged minister, full of honours, was murdered because he did not offer his daughter to his dissolute lord. Tyrannous, these rulers were not strong. One Sultan, finding a rival at the dwelling of a light-of-love, handed a quid of betel to a follower, who took it as a hint to remove the man. When the head of the murdered man's house sought revenge, the Sultan sent the assassin on a journey, and later despatched him bound to the offended chief, confident that he would be pardoned; the chief split his skull with an elephant goad! The Court was thronged with foreign adventurers, bibulous mahouts with Hindu names, Afghan bravoos, Tamil merchants ready to bribe even the Prime Minister with gold. The Sultan's most trusty warriors were at the mercy of slanderers. Though the influence of the many Muslim missionaries was great, yet spiritual pride, ignorance of the Malay language and physical cowardice made them unpopular. There was one so proud he would not open his door to the Sultan until he came on foot and unaccompanied. There was another so craven that, when the Sultan took him into action against the Portuguese, he clung to the howdah and cried: "This is no place to study the unity of God! Let us go back!"

Injustice and oppression and inefficiency might have ruined the trade of Malacca had the port remained under Malay rulers. But in 1509 a Portuguese captain, Diogo Lopez de Sequeira, entered the harbour, and the knell of Malay sovereignty was sounded.

3.—THE COMING OF THE PORTUGUESE

In A.D. 410 the great Roman Empire, which had dominated Europe with its wonderful civilisation and luxury, perished. For 800 years Europe was ravaged by hordes of robbers. Men lived in fortified castles and went out only to fight. Men of weak physique or peaceful temperament or high ideals entered the Church and became monks. The language of the learned of all countries was Latin, the language of Rome. At last out of confusion order began to emerge. The modern nations of Europe—England, France, Italy, Spain, Portugal, Germany and others—came to have each its own government, and in place of Latin its own literature. The greatest menace of these nations was Islam, which threatened to

overthrow them, as the Goths and Huns had overthrown Rome. So the princes and soldiers of Europe sailed to Palestine and fought Crusades against the Saracens. It was in the Crusades that the people of modern Europe first became acquainted with sugar, pepper, cinnamon, cloves, ginger, nutmegs and other spices, with cotton and silk and glass and Persian rugs, and all the produce of the East.

As yet there was no all-sea route from Europe to the East. No voyager had crept down the coast of Africa or reached the Cape of Good Hope. Commerce with the Orient went overland. From the days of Solomon there had been three routes between the Mediterranean and Asia. One route went through the Black Sea, round the Caspian, across Turkestan to China. Another went by way of Syria, through Mesopotamia to the Indian Ocean. The capture of Mesopotamia and Constantinople by the Turks closed both those routes. There remained open only the third route by way of Egypt and down the Red Sea.

The demand for the spices and silks of the East was very great. Italy was in the most favourable position to secure the trade. In Italy the port of Venice beat all rival traders by getting a monopoly from the Sultan of Egypt; the fleets of Venice imported the wares from Egypt and sold them at a huge profit to all the countries of Europe.

Who was to wrest this monopoly from Venice and to get goods from Asia without passing through Egypt?

About A.D. 1400 Portugal rose to power. She captured a city in Morocco, the first of the colonies of modern Europe. Her sailors discovered the Madeira Islands, the Canaries and the Azores, and later the West Coast of Africa. In 1486 Bartholomeu de Diaz sailed down and reached the Cape. The King of Portugal named it the Cape of Good Hope, because the Portuguese hoped that from it they would be able to reach the East Indies, the land of spices and gold. Twelve years later the famous Vasco da Gama fulfilled that hope and reached Calicut in India. But Vasco da Gama's attempts to trade were hindered by the Arab merchants, who were jealous of rivals and feared the loss of their monopoly. The struggle between the Portuguese and the Arab traders was very bitter for years, and horrible cruelties were practised on both sides. The first Viceroy, Don Francisco d'Almeida, contemplated only the establishment of godowns in India, and was opposed to dreams of a Portuguese empire in the East, declaring rightly that Portugal

with its population of a million people was not big enough for such work. D'Almeida advocated sea-power: Portugal's trade would be safe, so long as she could beat all comers at sea. The second Viceroy, the famous Affonso d'Albuquerque, had visions of empire; he laid stress on the need to build forts to protect godowns and force Eastern rulers to acknowledge the power of Portugal. D'Albuquerque laid the foundations of empire by conquering Ormuz on the Persian Gulf and Goa in India.

The "Malay Annals," written one hundred years later, give a vivid account of the arrival of the first Portuguese captain, Diogo Lopez de Sequeira, at Malacca in 1509:

"All the Malays crowded round him in wonder at the appearance of the Portuguese. They said, 'These are white Bengalis.' There were dozens of Malacca people round every Portuguese; some pulled their beards and patted their heads, others seized their hats or clasped their hands. The Portuguese captain went to interview the great Malay chief, the Bendahara. The Bendahara gave the captain's little son a Malay costume. The captain presented the Malay chief with a golden chain, and himself flung it over the sacred head of the chief! The chief's followers were angry, but the Bendahara stayed them, remarking, 'Take no notice; for he is a person of no manners!'"

In Malacca, again, the Portuguese aroused the jealousy of Indian and Arab traders; and the latter instigated the Malays to attack the godown which the Portuguese had been allowed to build on the shore. Some of the Portuguese were captured. And as his force was too small to fight the Malays, de Sequeira sailed back to headquarters at Goa.

The Viceroy at Goa, Affonso d'Albuquerque, equipped 800 Portuguese soldiers and 600 Indian soldiers and came with a fleet of nineteen ships to avenge the treatment of de Sequeira. In 1511 he sailed into Malacca with trumpets blaring and guns sounding. He demanded the return of the Portuguese prisoners. The Sultan delayed. D'Albuquerque burnt some huts on the foreshore and two ships from Gujerat which lay in the offing. The Portuguese prisoners were surrendered. D'Albuquerque demanded £33,000 as compensation for the destruction of the Portuguese godown and leave to build a fortified godown. It was refused. On the 1st July the Portuguese forces landed. It was a fierce fight, as fights went in those times. But in ten days the discipline of the Portuguese prevailed. Malacca was captured. Its Sultan escaped to Johore.

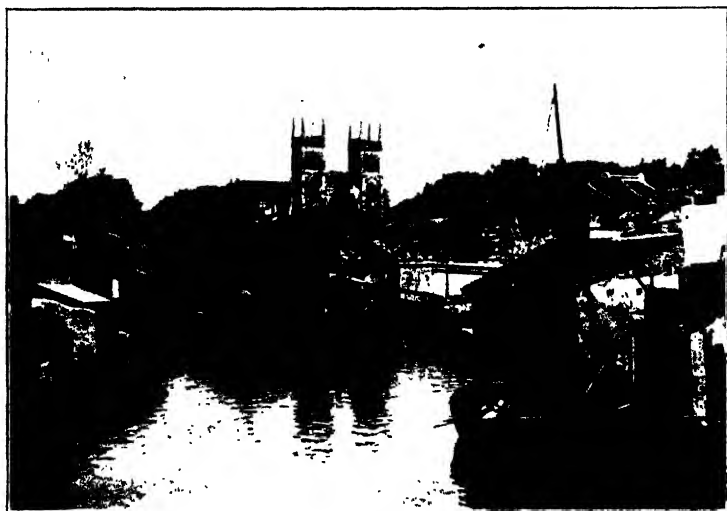
For 130 years Malacca was governed by the Portuguese, and during that time it was to the Portuguese what Batavia became later to the Dutch. D'Albuquerque minted a tin currency. He built a fort round the hill on which the Residency now stands: in 1613 it included the castle of the Governor, the palace of the Bishop, the hall of the Council and five churches. Missionaries came to spread the Roman Catholic faith; in the church of Our Lady of the Annunciation officiated St. Francis Xavier, the "Apostle of the East." Camoens, the celebrated poet, served there as a soldier. To this day Malacca is full of descendants of those early Portuguese, bearing names great in history and speaking still a form of the Portuguese language. The Portuguese introduced many articles previously unknown to the Malays; and, as we have seen, the Malay language has borrowed many culture words from them. Under their rule Malacca became the port for all trade with the Malay Archipelago and a port of call for ships to and from China. "This city of Malacca," wrote Barbosa, "is the richest seaport with the greatest number of wholesale merchants and abundance of shipping and trade that can be found in the whole world." Frequently it was attacked by the Malays, but its small garrison kept the flag of Portugal flying on this tropical outpost of their empire. Portuguese godowns were opened in Patani, at Macassar, in Borneo. Portugal took possession of the Moluccas. She captured and kept Macao. Only the power of Acheen restrained her from trying to gain a foothold in Sumatra.

But the dominion of Portugal was not built on solid foundations. Her population at home was small. Its best blood was spilt in foreign wars or died of dysentery and malaria in its tropical colonies. Commerce and government were too closely connected. Men, who might have been good officials nowadays, were encouraged to trade; and in dividing the profits they placed their own interests above loyalty to their country. Greed, too, made them cruel and unpopular. They cherished, also, an eternal fanatical feud against all Muslims.

Then the new Powers appeared, the Spaniards and the Dutch. In 1492 an Italian sailor (from Genoa), Christopher Columbus, with the help of Spain had sailed westward and discovered the West Indies and America. Thirty years later a Portuguese sailor, who had quarrelled with his own country and entered the service of Spain, Ferdinand Magellan, accomplished the longest voyage ever made—namely, from Spain to the Philippines by way of America

and the Straits now called after him. For fifty years Spain cared more about Mexico and Peru than about the East Indies. But at last the Spaniards got a firm footing in the Philippines. Then, in 1580, Spain seized Portugal and used her fleet to form part of the great Armada which perished in an attack on England. After that the days of Portuguese sea-power were numbered. Spain was content to occupy the Philippines. For the trade of the Malay Archipelago only the Dutch and the English were to remain rivals.

In 1641 the Dutch captured Malacca and fifteen years later Ceylon also; a decade later Bombay fell to the English. To-day



C. Ishii.

MALACCA TOWN.

out of all her Eastern possessions Portugal retains only a half of the island of Timor, Goa, Daman and Diu in India and Macao in China.

4.—THE DUTCH ASCENDANCY

In 1595 Cornelis de Houtman set out with a fleet of four ships, and after fifteen months of terrible hardships reached Java and then visited the islands of Bawean and Bali. The way to the Malay Archipelago was found. In 1602 the Honourable Dutch East India Company was established with a charter giving it the monopoly of Dutch trade in Malayan waters. In the same year not only did the Dutch open a factory at Patani, a preserve of the Portuguese

since 1517, but a Dutch navigator, Jacob van Heemskerck, visited Johore and left a factor. While there Van Heemskerck waylaid a Portuguese caraque returning from Macao, and took the cargo to Amsterdam, where the curios, lacquer ware, silk and porcelain fetched 3,000,000 guilders: even now the Dutch call the finest porcelain "caraque" after the name of the ill-fated Portuguese vessel. Such victories won great prestige in the eyes of the Malays, who welcomed help against Portuguese aggression: a Malay envoy even set out for Holland to negotiate an alliance, but died on the voyage. On the 14th May, 1606, Admiral Cornelis Matelief arrived, and three days later the first Dutch treaty with Johore was signed. The Malays were to help the Dutch to capture Malacca, receiving as reward the territories adjoining the town; and they were to allow no European to land in Johore without the sanction of the Governor of Malacca. Matelief won a victory over the Portuguese fleet but failed to capture the town. The Malays consented to an amendment of the treaty, ceding a trading station in Johore to the Dutch. Had their new head office in Batavia failed, the Dutch had resolved to transfer it to Johore. But Johore coquetted with the Portuguese and was therefore attacked and subjugated by Acheen, the power that now became the head of the Malay Muslim world, and led the rulers of Johore, Perak and Kedah into captivity. In 1613 the Achinese carried off not only the Sultan of Johore but the Dutch residents. On the death of Mahkota 'Alam, the redoubtable ruler of Acheen, Johore revived: its Sultan helped the Dutch to besiege Malacca, and in 1641 the fort was taken.

For more than a hundred years Dutch was the paramount European influence in the Malay Peninsula. On the 11th July, 1642, the Raja of Kedah, whom Matelief had visited in 1601, agreed with the Dutch East India Company to let it have half the tin produced in his country at a fixed price and not to admit ships without its permit. The coast was blockaded to enforce this monopoly, the Dutch sloops being frequently attacked by Malay "pirates." Perak pleaded her vassalage to Acheen and refused to make a treaty, but Governor-General Van der Lijn made arrangements for a monopoly of Perak tin with the Sultan of Acheen instead. In 1649 the Company collected in Malacca "770,000 pounds of tin, an extraordinary quantity," mostly from Perak. In 1650 a factory was opened at the mouth of the Perak river, though it was destroyed and its people killed a year later. Perak sent tin to Acheen in defiance of the Dutch, "riding the high horse" in spite of its

indebtedness to the Company. "Of the debt of the king and his chiefs in Perak there still remains to be paid 135,345 guilders,



GATE OF MALACCA FORT, DATED A.D. 1670.

which will apparently result in nothing," says the Dagregister of 1663. In 1676 Governor Bort wrote to Batavia: "Those of Perak

comport themselves but moderately with regard to their contract for the sole supply of their tin to the Honourable Compagnie and for refusing entrance to the English and all other foreign nations." In 1680 a contract was made, authorising a Dutch commandant lying at the mouth of the Perak river to attack all Malay vessels not provided with a *chap*. But a factory opened on the island of Pangkor in 1690 was destroyed. In 1758 the Dutch opened a factory at Tanjong Putus on Pengkalān Halban on the Perak river, and maintained it until the downfall of their power at Malacca. The *Misa Mēlayu*, a Malay eighteenth-century history of Perak, records how they obtained a monopoly of buying all tin that was brought down the Perak river at a fixed price of \$30 a *bahara* with a tribute of \$2 a *bahara* in addition to be paid to the Sultan, Mudzaffar Shah. A great number of dollars came into circulation in Perak. In the reign of the next ruler of that State, the famous Sultan Iskandar, a Tamil interpreter from Malacca in the employ of the factory at Tanjong Putus gave trouble. He came up-river with a letter without a proper covering and without informing the Laksamana and Shahbandar. The Sultan refused him audience. The Tamil's version of this episode caused the Dutch to send seven sloops from Batavia under a Commissary. Having hastily thrown up a fort, the Sultan received the Commissary with great state; the Dutch "doffed their hats and bowed," produced polite letters from Batavia, gave presents and bought 500 *bahara* of tin. A written treaty was made. This was in the year 1765. In the same reign the Dutch sent three sloops from Batavia under a Commissary, with letters and a request for tin. One day the Dutch captain called to the Malay port-officer (*Shahbandar*), as he passed in a dug-out, to visit him. The Shahbandar refused and was chased by the sailors, who asked if he thought he would meet a tiger in the sloop. "No," said the Shahbandar, "but there are a number of pigs," and refused to go. The Dutch fired on him but he escaped. The captain explained, "It was all a mistake; his men had been shooting monkeys as white folk must, and the Shahbandar thought they were aiming at him." The apology was accepted.

Dutch factories were opened also at Kuala Selangor and at Kuala Linggi. The Company commanded the commerce of the whole of the west coast of the Peninsula. Also it claimed the trade of Pahang, which, however, was quite insignificant.

During the eighteenth century the Bugis gave trouble. They dominated Johore, captured Riau, seized Selangor, and even

threatened Malacca. But the real danger to Holland's domination of the Peninsula came when in 1786 Francis Light founded an English settlement at Penang. In 1795, as a consequence of the Napoleonic War, England took over Malacca from the Dutch East India Company. Before it was handed back, the Company, wasted by the cost of many wars and the peculation of its servants, had been wound up and its liabilities taken over by the Dutch Government. Except for a brief period of seven years, Holland's influence in the Malay Peninsula had ceased. The vicissitudes of its last years in Malacca will be told below.

5.—BRITISH ASCENDANCY IN THE STRAITS SETTLEMENTS

TRAFFIC WITH THE MALAY ARCHIPELAGO.—Drake threaded the Straits of Malacca when he sailed round the world in 1579. On the 10th April, 1591, James Lancaster left Plymouth as second in command of three small ships bound for the gorgeous East. In June the fleet reached Penang, where its "refreshing was very small, only of oysters growing on rocks, great whelks and some small fish which we took with our hooks." Calling at Pulau Sembilan off the Perak coast it captured three Portuguese vessels, laden with pepper and spices, and returned safely to England. The East India Company was formed. Lancaster was selected to command its first fleet, and, accompanied by Davies the navigator, dropped anchor at Acheen on the 5th June, 1600, made a commercial treaty with the ruler, and having loaded his ships with pepper sailed away and established factories at Bantam and in the Moluccas. It was not long before the Dutch entertained towards the British the bitter feelings of men robbed of a trade monopoly, and in 1622 hostilities culminated in the massacre of Amboyna. The only factory of importance retained by the British was at Bantam, whence they were ousted in 1684, losing their foothold in Java and the centre of their pepper trade. The Court of Directors, having failed to get permission to erect any building but a wooden factory at Acheen, contemplated a settlement at Priaman, but in disobedience to their orders the authorities at Madras chose instead Bengkulen (Bencoolen) on the east coast of Sumatra, a spot ideal neither for health nor trade, though except for a temporary occupation by the French in 1760 it remained British down to 1824, and was the sole station that preserved England's interests in the Malay Archipelago.

THE FOUNDING OF PENANG, A.D. 1786.—Bengkulen, however, did not provide a harbour for the Company's fleet during the

north-east monsoon which prevails along the Coromandel coast. And one of the first pioneers to discern that a more central and satisfactory outpost must be found against Dutch aggression was Francis Light, who, having resigned the Royal Navy in 1765, went to India, was given command of a ship plying between India and the Malay ports, and settled as the representative of a Madras firm in the old fort at Kuala Kedah. In 1771 his firm forwarded to the Government letters from Light intimating that the Sultan of Kedah would deliver to the English Kuala Kedah and the whole coast up to Penang in return for protection against the Bugis of Selangor and the Siamese. The Madras authorities sent an agent to Kedah, but, as he could not promise help against Selangor, negotiations failed. Light retired disappointed to Ujong Salang, or, as it is corrupted, Junk Ceylon. When in Calcutta in 1780, he interviewed Warren Hastings and got his approval for a scheme for the occupation of Junk Ceylon, but the outbreak of war with France frustrated it. In 1784 the Company tried to establish a station at Riau (Rhio) but were forestalled by the Dutch. In 1786 Light got a grant of Penang from the Sultan of Kedah, and not only was his action welcomed by the Company's Directors, but he was appointed first Superintendent of the new Settlement. However, the Company's promise to fulfil the implied obligation of the arrangement and help the Sultan against his enemies was vague. In vain Light asked for a definite treaty and the payment of monetary compensation for the island. In 1790 the Sultan prepared to recover the place by force, but he was anticipated and defeated by Light, and concluded a treaty ceding Penang in perpetuity for a subsidy of \$6,000 and excluding all other European nations from settlement in Kedah.

PROVINCE WELLESLEY.—In 1800, six years after Light's death, the Sultan ceded what is now Province Wellesley for an additional subsidy of \$4,000. Even if the East India Company was not technically guilty of that cowardice and direct breach of faith in dealing with Kedah of which Syvettenham accuses it, still the evasions and indifference that marked its policy were lamentable, and brought disaster on Kedah from Siam and a slur on the Company's name. But the Company soon ceased to regard Penang as a valueless or expensive settlement. Its naval officers extolled the place for its harbour and its supplies. Colonel Wellesley, afterwards Duke of Wellington, visited it in 1797, on an abortive expedition to Manila, for which the island was made

the rendezvous, and he praised its military position to the Indian authorities. In 1805, owing to hopes raised by Colonel Wellesley's report, Penang was promoted a Presidency and its first Governor arrived. Though Singapore as a free port dealt its commerce an irrecoverable blow, it was not till 1827 that customs duties were abolished at Penang. Had Raffles' fame depended solely on the founding of Singapore, it would be doubtful if it should rank so very much higher than that of the pioneer of British Malaya, Francis Light, whose northern settlement was the first insuperable obstacle to the Dutch acquiring exclusive influence in the Peninsula.

MALACCA.—In 1795, acting as the protectors of Dutch rights usurped by Napoleon, the English occupied Malacca, and ordered its dependencies, Riau and Perak, to consider themselves under the orders of His Britannic Majesty. In 1802, as a result of the Peace of Amiens, Malacca was to have been restored to Holland. But war broke out again in Europe and the Company reluctantly kept a rival settlement to Penang, expensive to maintain and likely sooner or later to be handed back to the Dutch. With the approval of the Home Government it was resolved to destroy the fortifications, remove the population to Penang and abandon the place. It took two years and cost £4,000 to demolish the historic fort. Meanwhile, in 1808 Raffles, recently appointed Agent for the Governor-General in Eastern Seas, visited Malacca and wrote to the Court of Directors an able memorandum pleading for the retention of a long-settled and prosperous agricultural territory. Raffles was thanked and the order for evacuation was cancelled. In 1811 Lord Minto used Malacca as the base for the military expedition that took Java. After Napoleon's downfall, the Treaty of Vienna stipulated for the retrocession of the settlement. The local mercantile community was alarmed at the chance proffered to Holland to regain commercial control of the Straits and damage the trade of Penang. But the Dutch, engaged with occupying Riau, did not take over Malacca till the 21st September, 1818, whereupon they set to work to recover their monopoly with the native States, and made treaties with Johore, Selangor and Rembau. Finally, in 1824, the British ceded Bengkulen to Holland, in exchange for Malacca and a few small settlements in India. But by that time Malacca had a more formidable commercial rival than Penang in Raffles' new settlement, Singapore, and her revenue had fallen by more than half.

THE NANING WAR, A.D. 1831-32.—For years Malacca drained heavily the resources of the Company. In addition the Company became involved in a petty but costly war with Nanning, a small Minangkabau colony in the hinterland. In return for their recognition of his title, the chief of Nanning had paid the Dutch a tithe on a rice-crop estimated by legal fiction at 2,000 *gantang* and the English had confirmed this arrangement in A.D. 1801. About 1830 the East India Company, irked by the cost of the Malacca Settlement, decided that the tithe must be paid on the total crop. The ruling chief, Dul Sayid, refused to comply and effectively resisted the first force sent against him. A second expedition was required to subjugate these few villagers. Nanning became a district of Malacca. Dul Sayid was pensioned and his heirs tacitly allowed to use the old title Sri Raja Měrah, though it was not till long afterwards that the office received an adequate stipend and the legal sanction of the British Government.

THE FOUNDING OF SINGAPORE, A.D. 1819.—In 1816 the Treaty of Vienna restored not only Java but Malacca to the Dutch. Even before that so little interest was taken in Malaya that it had been proposed to abandon Penang for the Andamans. South of Penang, the only outpost against Dutch trade aggression was Bengkulen, a station to this day insignificant. Reports on the importance of Penang produced a flicker of interest in the Supreme Government at Calcutta. Colonel Bannerman, the Governor of Penang, was instructed to acquire the island of Banten; but the Dutch were already at Riau and the attempt failed. The Penang Government folded its hands in resignation.

Now in 1805, on the appointment of the first Governor of Penang, Stamford Raffles, a promising junior clerk in the India House, was sent out with him as assistant secretary. A keen interest in Malay studies made him intimate with a friend of Sir Walter Scott, the peasant polyglot, Dr. Leyden, who brought him to the notice of his patron the Earl of Minto, then Governor-General of Bengal. In 1810 Raffles went to Calcutta, read a paper to the Asiatic Society on the maritime laws of the Malays, interested Lord Minto in the project of conquering Java, and was made Agent to the Governor-General for the Malay States, with headquarters at Malacca. From 1811 till its retrocession to the Dutch in 1816 he was Lieutenant-Governor of Java. After that he was appointed Lieutenant-Governor of that dead settlement, Bengkulen. In 1818 he proceeded to Calcutta, and persuaded the Marquis of Hastings to give

him a mission to find some port south of Malacca to further British trade in the Archipelago and with China. Early in the following year Raffles sailed southwards from Penang on his quest. Although he visited the Karimons on his way and satisfied himself they were unsuitable, already "the ancient town of Singapura" was in his mind.

Once, it may be presumed, a colony of the Malay kingdom Palembang (or Sri Vijaya), Singapore has retained its Hindu honorific given to it, as was the Malay custom in early days, in addition to its native name, now forgotten, Tumasik, the "country on the seas (*tasek*)."¹ Malay legend explains its Sanskrit title to mean "Lion City," and relates how its first ruler, Nila Utamā, a descendant of Alexander the Great, met on its site an animal very like a lion. Actually Nila Utama was a nymph of Indra's heaven, transformed by romantic chroniclers into a prince. And the name Singapura only shows what historical evidence has verified, that the settlement destroyed just before A.D. 1365 by the Javanese empire of Majapahit was a city (*pura*) colonised by people under Indian influence. Possibly before historical times it had been a Mon-Khmer settlement. Though in 1552 it was still a port of call from which St. Francis Xavier despatched letters to Goa, and early in the seventeenth century had a harbour-master (*shahbandar*), yet from the fourteenth century down to its refounding by Raffles it was little more than a fishing village.

Having discovered that Holland had never had a factory on the island, Raffles hoisted the Union Jack on the 29th January, 1819. The Dutch denounced the action as sharp practice. Raffles had got a site for a trading station in the island from the Temenggong of Johore, who explained that he was subordinate to the Sultan of Lingga (representative of the old Johore sovereignty), a ruler within the sphere of Dutch influence. In accordance with the common Malay custom of choosing the most suitable member of a royal house to succeed, a younger son had been made Sultan of Lingga and recognised by English and Dutch. Raffles elected to regard the elder brother as rightful Sultan, installed him as such and got him to countersign the treaty ceding Singapore. The British Government viewed with concern the risk of a conflict with Holland over a tropical swamp and talked of abandoning the place, but Raffles' protests to influential friends availed. The Marquis of Hastings, in reply to the objections of the Netherlands Indies, declared that Great Britain had made a treaty with Riau a month

earlier than the Dutch Treaty, but, though that was true, the British had not only allowed the Dutch to make a subsequent treaty but to acquire actual possession of Riau. Hastings further contended that when Great Britain had taken Malacca in 1795, Holland had declared Riau Johore and Lingga to be independent of Malacca, which in 1819 was, of course, Dutch territory. That was true, and Holland's action in seizing Riau after the English had made a treaty with its ruler was as high-handed as the action criticised in Raffles. Unsupported by his own Government and thwarted by his subordinates, Raffles had made a swift move in the game of commercial rivalry that stood for politics then in the Eastern seas. In 1824 a final treaty was contracted between Great Britain and Holland, by which the Dutch ceded Malacca and admitted British suzerainty over Singapore; whereupon another agreement was made with the Sultan and the Temenggong of Johore to acquire an irreproachable title for the whole island. Raffles foresaw fully the geographical importance of the swampy jungle-clad island: "Timber abounds in the island and its vicinity; a large part of the population are already engaged in building boats and vessels, and the Chinese, of whom some are already engaged in smelting the ore brought from the mines on the neighbouring islands and others employed as cultivators and artificers, may soon be expected to increase in a number proportionate to the wants and interests of the settlements. By maintaining our rights to a free commerce with the Malay States and inspiring them with a confidence in the stability of it we may contemplate its advancement to a much greater extent than has hitherto been enjoyed. Independently of our commerce with the tribes of the Archipelago, Singapore may be considered as the principal entrepôt to which the native traders of Siam, Cambodia, Champa, Cochin China and China will annually resort. It is to the Straits their merchants are always bound in the first instance. . . . One free port in these seas must eventually destroy the spell of Dutch monopoly, and what Malta is to the West that may Singapore be to the East." To-day in Singapore the statue of Raffles looks over the seventh port in the world, and its base is frequented by a crowd of more races than are found in any other city except Cape Town.

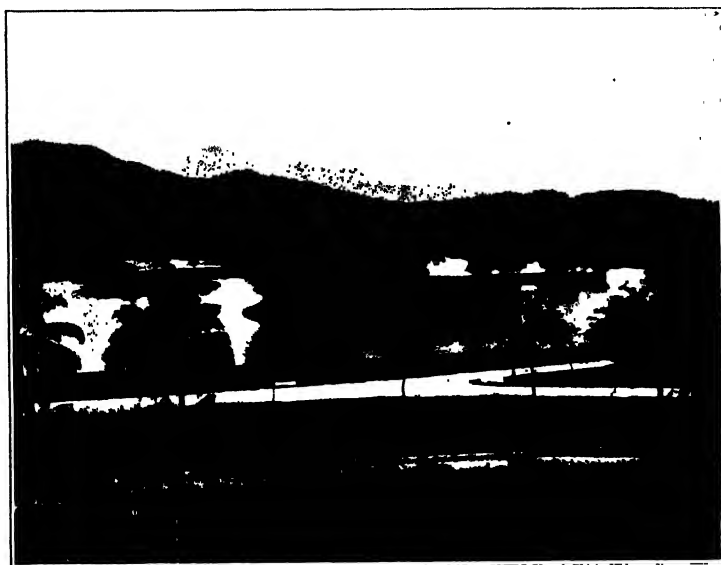
The Colony now consists of the Island of Singapore, the Island of Penang, Province Wellesley, Pangkor and the Sembilan Islands ceded by Perak in 1826 as a base to suppress piracy, the Dindings—a strip of territory on the mainland ceded in 1874 by the Treaty

of Pangkor, Malacca, and outside the Peninsula the Island of Labuan ceded by the Sultan of Brunei in 1846, and the Cocos Island and Christmas Island acquired in 1886 and 1889 respectively.

6.—BRITISH RELATIONS WITH THE MALAY STATES

Even before Dutch dominion in the Peninsula had passed away, the British began to have relations with the Malay States. Already it has been told how Penang and Province Wellesley were acquired from Kedah. In 1801 an engagement was concluded with Naning. In 1818 a treaty was made by the Governor of Penang with the Sultan of Perak, securing to British subjects the right of free trade with that State. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney treaty with Siam in 1826 the independence of Perak and of Selangor was recognised, though the Sultan of Perak was permitted to send tribute of gold and silver flowers to Siam if he desired: the British also agreed to defend Perak from any attacks from Selangor. In the same year the Governor of Penang despatched a few soldiers to Perak and compelled the forces of the Raja of Ligor to evacuate their position on the Perak river. In October, 1826, also, the Sultan of Perak ceded to the British the Dindings and the Island of Pangkor as posts to suppress piracy, and agreed to send no more tribute to Siam but to rely entirely on the protection of the British. Boundary and commercial treaties were made with Rembau. In 1855 the British arranged in the interests of good order that the absolute sovereignty of Johore should be given to the Temenggong, the Sultan retaining only Muar, which after the death of the then Sultan his house lost by the vote of the people of Muar to the Temenggong's family. But despite all these treaties and engagements with Malay chiefs, Great Britain had no desire to mix in the politics of the hinterland, unless the peace and security of the Straits Settlements were threatened. Britain and Holland might be at war, Britain and Siam might make treaties about him, but the Malay Raja played the part of the mouse-deer in the Malay tale who stood untouched while elephants fought over his head. Then in the middle of the nineteenth century the Chinese tin miner aimed a blow with his pick at the mouse-deer, and the history of the leading native States for the next quarter of a century is the record of the Malay ruler's failure to deal with this vigorous inter-loper, a failure that led at last to active interference by Great Britain.

The trouble between Chinese and Malays started in Larut, then under the almost independent control of the Mantri, one of the four big Perak chiefs. The first tin mines to be worked were on the present site of Taiping Gaol, and the next at Kamunting, where mud on the flanks of a runaway elephant revealed the presence of ore. The Chinese were divided into two factions—the Si-Kuans who were members of the Ghi Hin Triad Society, and the Go-Kuans who belonged to the Hai San and Toa Peh Kong organisations. The factions fought with varying fortune, hired bravoes and carried on war by sea as well as by land, upset life and commerce in Penang,



Nakujima.

THE LAKE, TAIPING.

and rendered trade along the Perak coast impossible. At the same time there were rival claimants to the throne of Perak, two "helmsmen to the ship of State," and civil war among the peasants who constituted the crew. In 1872 Lord Kimberley replied to Malacca traders who had petitioned about losses suffered from disturbances in Selangor, that it was the Government's policy only to suppress piracy and punish aggression on British territories, and that it could not answer for the lives and property of traders who chose to risk them in the Malay States. A year later "Her Majesty's Government found it incumbent to employ such influence as they possess

with the native princes to rescue, if possible, these fertile and productive countries from the ruin which must befall them if the present disorders continue unchecked." Sir Andrew Clarke, on assuming the office of Governor, was instructed especially to consider if it would be advisable to appoint a British officer to reside in any of the States, "expenses connected with it to be defrayed by the Government of the Straits Settlements." Accordingly in 1874 he made the Perak chiefs sign a treaty at Pangkor, accepting a British Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom," the cost to be "a first charge on the revenues of Perak," a Malay civil list to be the second charge, and "the collection and control of all revenues and the general administration of the country to be regulated under the advice of the Resident and the Assistant Resident." The Assistant Resident, Captain Speedy, one of Kipling's three "Lang Men," soon restored order in Larut. The source of danger now was the Malay chiefs. It was indiscreet enough to have allotted the revenue of the country primarily to the maintenance of the Residents and their staffs. But in trying to lay his hands on some revenue, Mr. Birch, the first Resident, started to collect all taxes, even those which had been the immemorial perquisites of chiefs. And as the compilation of a Malay civil list by a Resident ignorant of the language and customs of the people took a considerable time, powerful dignitaries were left, to adapt one of their own proverbs, with the ladder of perquisites kicked from under them and their legs dangling in the air in fear and anger. Again, Mr. Birch, acting admirably as a civilised gentleman but hurriedly as a diplomat, protected debt-slaves and helped them to escape against the spirit of the Pangkor Treaty, and without compensating owners for the loss of property that in Malay eyes was legitimate and valuable. Finally, the Sultan was persuaded to sign a proclamation transferring the administration of the State to the Resident, who would act in his name. Mr. Birch was speared while distributing this document. The somewhat Gilbertian campaign of the expedition sent to avenge his death is humorously told in Sir George Scott's tale, "Needs Explaining." Three chiefs responsible for the Resident's death were hanged. Sultan Abdullah, the Mantri and two other chiefs were transported to the Seychelles, whence later they were allowed to return. The Secretary of State determined to give the Residential system a further trial, but warned Residents that they were advisers and not rulers.

“ The Residents are not to interfere more frequently or to a greater extent than is necessary with the minor details of government; but their special objects should be the maintenance of peace and law, the initiation of a sound system of taxation, with the consequent development of the resources of the country, and the supervision of the collection of the revenue, so as to ensure the receipt of the funds necessary to carry out the principal engagements of the Government, and to pay for the cost of the British officers and whatever establishments may be necessary to support them.” The policy laid down was carried out to perfection by perhaps the greatest administrator the Malay States ever had, Sir Hugh Low, who became Resident of Perak in 1877 and whose “ political child ” modern Perak is. “ He was confronted with all the revenue difficulties of Mr. Birch, with a heavy debt caused by the war, with the need of replacing the military forces by a costly constabulary, and with a discontented population under many turbulent leaders. His position seemed almost hopeless. He began by laying down as an axiom that any attempt to govern a people by overawing them was unsound on financial grounds if on no others. He reduced the cost of the police by giving police duties to native headmen and relieving many villages of their police stations. He settled the question of the feudal revenues of the chiefs by making them local headmen and giving them a substantial percentage of all Government dues collected by them in their districts. He secured a very useful addition to the revenue by substituting a definite land-tax for the indefinite right possessed by the State to the forced labour of its people. He created a State Council of leading men whom he consulted on all important issues; and he took the views of the people before appointing a local chief. He had the satisfaction of seeing the Perak debt paid off in a few years and the abolition of debt slavery by the end of 1883.” Out of what the Malays had taken a decade earlier to be the ruthless strength of the British lion had come the sweetness of justice, peace and good counsel.

While Perak had been afflicted with unruly Chinese miners and rival rulers, the Selangor royal house had been so divided against itself that every raja did what was right in his own eyes and no central government obtained. Along the coast piracy was rampant. A gunboat had to shell the port at Kuala Selangor where the pirates were sheltered; a bluejacket was killed and others wounded. The Sultan declared that piracy was a matter for “ the boys,” his sons, and that he took no part in it. His son-in-law, an enlightened

Kedah raja, had strong garrisons under European officers at Klang, Kuala Lumpur and Kuala Selangor. But the forces of misrule were strong. The Kuala Lumpur garrison was cut off; one European fell in the fight, and another had his throat cut like a buffalo and was left to bleed to death. The Bendahara of Pahang sent several thousand men over the passes to help the Kedah raja, and open warfare ended. Then all the passengers and all the crew save one of a Malacca trading vessel were murdered at Kuala Langat. Sir Andrew Clarke sent commissioners to enquire into the case. Seven of the pirates were executed by the creese. The Sultan accepted a Resident, and from 1874 the history of Selangor has been a record of peace and prosperity.

During the disturbances in Selangor, refugees from that State fled from the wrath of the British into Sungai Ujong. Warned by the Straits Government, the territorial chief, the Dato' Klana, refused them shelter, but his rival, the Dato' Bandar, won such popularity among the Malays by receiving them that the Klana had to invite the assistance of the British to maintain his rule. A Resident was accepted and the peace of the little State secured. In 1876 the Dato' Klana, then under British protection, was attacked by the Yamtuan from Sri Menanti for favouring a rival to that dignity. A British force crossed the pass, and the Yamtuan agreed to live in peace at Sri Menanti with authority only over the States in his immediate neighbourhood, and to refer any disputes to the Maharaja of Johore. Between 1883 and 1887 Jelebu, Rembau and Sri Menanti all negotiated treaties with the British Government, their readiness to do so being due to the interest Sir Frederick Weld, a Governor with a winning personality, took in the Malay States. In 1883 both the Yamtuan and the Penghulu of Jelebu, the small State bounded by Pahang and Sungai Ujong, applied to him to settle their differences and appoint a British Resident. In the same year the Rembau chiefs engaged to refer to the Governor all troubles and disputes, and in 1887 they accepted a British administrator on the condition that one-third of the revenue should be paid to the chiefs, an arrangement still in force. In 1889 the Yamtuan and the rulers of Tampin and Rembau asked for a Resident and agreed to a confederation to be known as Negri Sembilan, which later took in Sungai Ujong and Jelebu, then under a separate Resident. Finally in 1898 the modern Negri Sembilan was formed by the election of the Yamtuan of Sri Menanti as titular ruler of the whole State. In a saying the Negri Sembilan people have borrowed

from their Minangkabau ancestors, "the intricate had been disentangled, the turbid cleared, the rain had ceased and the mist dispersed." Under the clear sky of British protection they cultivated their rice-fields and engaged in village squabbles over tribal offices, and became perhaps the most happy and prosperous Malay community in the Peninsula.

There used to be a Perak saying: "If you are an elephant, don't belong to the people of Padang Asam; if you are a buffalo, don't belong to the energetic rice planters of Sayong." If one were a Malay peasant in the seventies, the last dwelling-place one would choose was Pahang. In 1887 Sir Frederick Weld employed Hugh Clifford, then a young Perak cadet, to negotiate a treaty with the ruler. "I think I can see him now," wrote Sir Hugh nearly thirty years later, "dressed in sleeping-jacket and *sarong* and with disordered hair, tramping about his bedroom in exclamatory delight when, having arrived in Singapore unexpectedly in the middle of the night, after an absence of three months, I woke him up to tell him the result of my mission just as the dawn was breaking." The treaty promised British help in the event of external attack, authorised the Dato' Bendahara to adopt the style of Sultan, and arranged for a British Agent to be stationed at the capital. "This," Weld announced, "with the recent arrangements made in regard to Sri Menanti, Rembau and Jelebu, has consolidated British influence over the whole Peninsula east and west, south of the States in which Siam claims interference." In the next year a Chinese British subject was murdered at Pekan under peculiarly atrocious circumstances (narrated in Clifford's "A Corner of Asia"), and with the advice of the Sultan of Johore the ruler of Pahang consented to receive a British Resident. Unfortunately there was a very meagre revenue out of which to defray the cost of administration and grant allowances to chiefs. Certain of the major chiefs took up arms against the new order and were driven out of the State. Two years later, in 1894, they descended from Kelantan and Trengganu, then under Siamese influence, and raided the Tembeling district, whence they were hunted back and most of them secured after a prolonged expedition under Hugh Clifford. From that time Pahang has enjoyed undisturbed peace and steady development.

Perak, Selangor, Negri Sembilan and Pahang make up the Federated Malay States.

By the Bangkok Treaty of 1909 Siam transferred to Great Britain all rights of suzerainty, "protection, administration and control

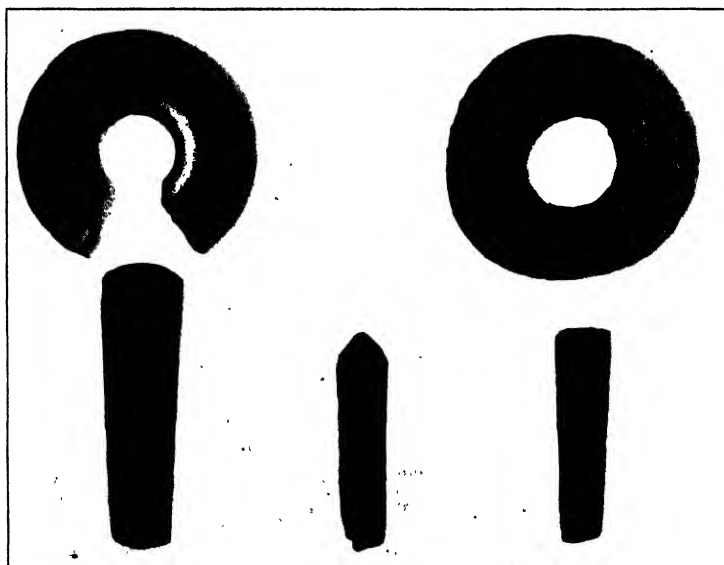
over Kelantan, Trengganu, Kedah and Perlis in return for a modification of British extra-territorial jurisdiction in Siam. In the following year a treaty was concluded with Kelantan, similar in the main to the Treaty of Federation, the ruler undertaking to pay the salaries of an Adviser and Assistant Adviser and to give effect to their advice in all matters of administration other than those touching Islam or Malay custom. In the same year the Sultan of Trengganu made a treaty, receiving a British Agent with functions similar to those of a Consular Officer, till by a later treaty of 1919 an Adviser was accepted with the same powers as the Adviser to Kelantan. Kedah and Perlis were already progressive States having close ties with Penang. The introduction of British protection over the four new States was smooth and rapid.

British relations with Johore ever since the founding of Singapore had been intimate and cordial. In 1885 a treaty was made, recognising the assumption of the title of Sultan by the Maharaja and promising protection, while the Sultan agreed to provide a residence for a British Agent should the Governor desire to appoint such an officer. In 1914 the Sultan asked for a General Adviser with powers similar to those of Advisers in the other Malay States, and a new treaty was concluded which inaugurated for the State a period of unparalleled prosperity. At last the whole of the Malay Peninsula, south of Siamese territory, was sheltered under the flag of Great Britain.

CHAPTER XV

ARCHÆOLOGY AND ANTIQUITIES

PREHISTORIC REMAINS.—Polished stone axe-heads and other stone articles, bronze celts and iron tools of an obsolete type have been dug up from time to time in the Malay Peninsula, but so far no sure evidence has been traced to date them or to assign them to any particular people. Though the stone implements belong



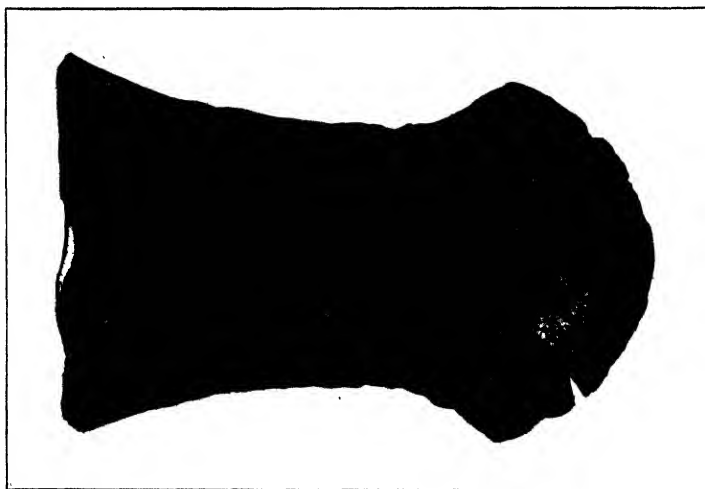
STONE CELTS.

to a neolithic culture, it is certain they are in no way comparable in age with the neolithic remains of Europe.

Stone axe-heads, which appear to be especially common around Kuala Tembeling in Pahang, are known to the Malays as “thunderbolts” (*batu lintar*) and are sometimes thought to possess magic

properties; there are three main types, which shade off one into another by gradations. Other stone implements are some curious cross-hatched stones, perhaps pounders for bark cloth, and discoidal circlelets, possibly club-heads. Exploration of caves in the Peninsula has yielded human remains, mostly fragmentary, bones of animals eaten by the cave-dwellers (all seemingly of extant species), fluviatile and marine molluscan shells, grinding and pounding stones, roughly chipped stones, and a few polished stone implements generally of inferior type.

A few tiny socketed bronze or copper celts have been unearthed in tin mines, two at Kenaboi (in Negri Sembilan), whence also came



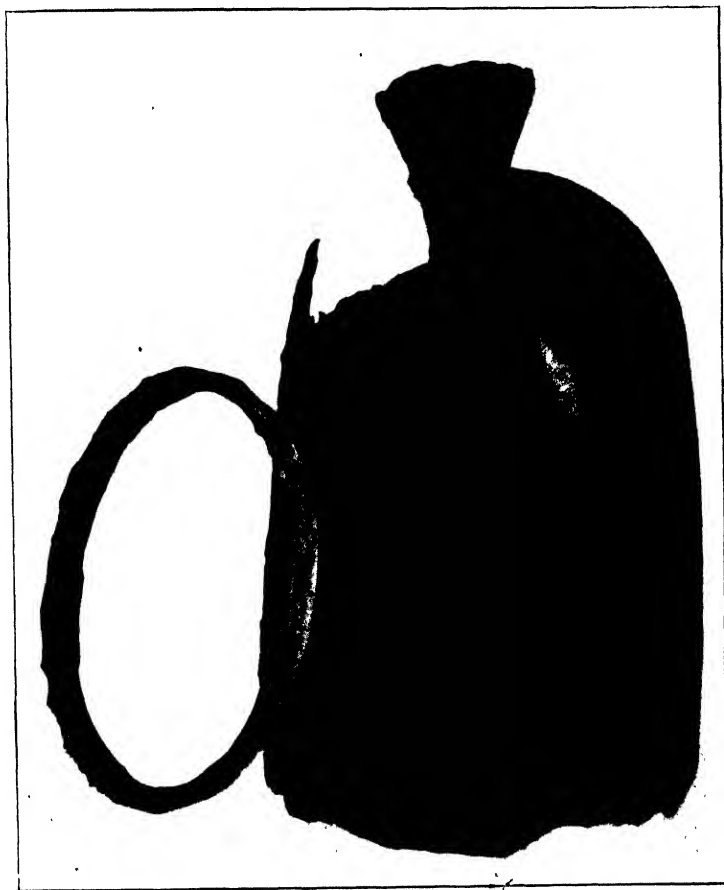
BRONZE AXE-HEAD.

two of the discoidal circlelets and a cross-hatched bark-cloth pounder. Along with the bronze celts were found small clay crucibles for melting the metal. The Perak Museum possesses a bronze bell-like article dug up at Klang in Selangor with three typical iron tools inside it.

The obsolete iron tools got in different parts of the Peninsula are believed by Malays to be the fossilised bones of legendary apes that had iron sickles projecting from the elbow (*tulang mawas*)! This myth may be based on exaggerated accounts of the orang-utang of Sumatra and Borneo.

It is noteworthy that at Kenaboi stone implements were asso-

ciated with bronze, and at Klang bronze bells and iron tools were found together. On the forest-clad top of Changkat Mantri near the Bernam river on the Perak side a surveyor's party unearthed a prehistoric grave, lined with large flakes of granite, which must have been dragged or water-borne for miles, and containing three



BRONZE BELL-LIKE ARTICLE.

round cornelian beads; later excavation revealed immediately round the grave much rough pottery, a stone bark-pounder, fragments of a bronze (or perhaps enamelled) bowl, and an iron tool (*tulang mawas*). It would appear almost as if the same people used the stone and bronze celts and iron tools that have come to light

in the Peninsula, and it has been surmised they were the Mon-Khmer miners whose language has left its mark on the dialects of



IRON IMPLEMENTS.

the aboriginal tribes and whose mining pits are called "Siamese mines" by the Malays.

HINDU REMAINS.—In the ruin of an ancient brick building near Bukit Meriam in Kedah, a small building some ten feet square, Colonel James Low found a slab, a kind of slate, inscribed with the formula of the Buddhist creed and a couplet declaring how “it is through lack of knowledge that Karma accumulates. Karma is the cause of man’s rebirth. Through knowledge of the nature of things it comes that men effect no more Karma, and from the absence of Karma it follows that men need not be born again.” Probably the small building where the slab was discovered was the hut of a disciple of Sakya. Kern, the great Dutch scholar, who deciphered the Sanskrit inscription, could not say if it were older than another inscription unearthed by Low, “while excavating some old ruins on a sandy side in the northern district of Province Wellesley.” The position of these ruins is unknown, but it has been suggested it was one of the mounds of cockle-shells that used to exist not far from the Muda river and also at Bruas in the Dindings. The inscribed stone seems to have been the upper part of a column. On a copy of it can be seen the representation of a *stupa*, the under part formed by a sphere and not as usually by a hemisphere; above the sphere rises a row of so-called umbrellas. On either side is a line of writing, containing the same couplet as on the Kedah slab. Along the edge of the pillar is another broken inscription which shows that the monument was a gift to a temple of a pious Buddhist sea-trader, Buddhagupta, who lived at a place called “Red Earth.” The Southern Indian style of writing agrees exactly with the type found in Venggi and in Champea in West Java, and enabled Kern to give A.D. 400 as its approximate date. Colonel Low sent clay facsimiles of the above two inscriptions to the Asiatic Society of Bengal, which it is to be hoped still exist and ought to be copied for our Peninsular Museums. He also went on an elephant to transcribe a group of seven inscriptions on the weather-worn and sloping side of a granite rock at Cherok Tokun, which lies near the centre of Province Wellesley. They are too small and indistinct to be more than contributions to palæography. One is written in nearly the same type as Buddhagupta’s inscription. The characters of another Kern are considered to be not older than the sixth century and similar to those of the oldest Cambodian inscriptions of Bhavarman. Some fragmentary clay tablets were found nine feet below the floor of a cave in Kedah, bearing no figures but undecipherable inscriptions in Nagari or North Indian script of the tenth or perhaps the seventh century A.D. Five votive tablets from Trang have

been identified as relics of Mahayana Buddhism belonging to the western group of the same characters of the eleventh century A.D., and resembling the characters of the Benares grant of Karnadeva and the grants of the Rathors of Kanauj; on the obverse are Buddhas and Bodhisattvas. On the top of Kedah Peak are a hearth about sixteen feet square of granite slabs having in the centre a well, another hearth a little smaller, signs of nine smaller hearths between the two large, and the foundation of what appeared to have been a rubble wall. The fact that cut granite and bricks have been carried 4,000 feet up a mountain where there is plenty of sandstone would seem to point to the remains being those of some religious building. Near a laterite mound on the banks of a stream, Sungai Bujang (on Sungai Batu Estate) Kedah, there was found recently and removed to Taiping Museum a granite statue apparently of Devi, the wife of Shiva, but it is too much weathered for certain identification.

At Tanjong Rambutan in Perak, sixty feet below the surface in a mine, was unearthed a little bronze image apparently of a walking Buddha. Another Buddha Rajadhiraja, of Siamese type of the fifteenth or sixteenth century, said to have come from Batang Padang, is in the Perak Museum and yet another was found in Selangor.

Two Buddhist seals from Goa Gambar in Pahang are now in Raffles Museum: on one are six figures, short and thickest, unlike those of Trang and reminding one of Javanese types; the three on the top row are Buddhas, and in the centre of the lower row sits a large Buddha, flanked by two standing figures, with a seven-hooded snake above his head.

At the mouth of the Singapore river in Raffles' time was discovered a large rock inscribed with undecipherable lettering. Notwithstanding the protests of Colonel Low the stone was blasted later by the Public Works Department. "It seems to me," comments Munshi Abdullah, "it was a very improper thing to do." After lying in the verandah of the Treasury at Singapore, where they were used as a seat by the Sepoy guard, several fragments with lettering were sent to Calcutta, one of which has since been lent to Raffles Museum, Singapore, where it is now preserved. All that has been so far ascertained is that it was in a script used in Majapahit about the middle of the fourteenth century.

Beside the old cemetery on Fort Canning hill is a stucco-covered tomb (which has been supposed to be of seventeenth-century workmanship and is certainly not older), wherein tradition places the

remains of Sultan Iskandar Shah, the first ruler of old Malacca to be named after Alexander the Great! Coolies refuse to open it.

Was there ever or is there still some pre-Malay inscription to be found at Tanjong Surat across from Changi on the Johore side? What does the name Batu Pahat, also in Johore, signify?

No one has yet discovered the grave of Badang, the athlete mentioned in the sixth chapter of the *Séjarah Melayu*, which lay



THE BATANG PADANG BUDDHA.

till the seventeenth century at Tanjong Bulus (or Buru), the southernmost point of Asia. Rouffiac, however, surmises it was not a Tamil relic, but a stone set up by D'Albuquerque's ambassadors to Siam, noted on Lodewycksz' chart of 1598 as a *padrão*.

Eredia records how in his day there stood on the top of the hill at the extremity of Cabo Rachado (=The Split Point) a marble tank or the ruins of the foot of a pyramid-grave of the Permaisura,

Malacca's first ruler, after whom the cape was called Tanjong Tuan: probably it was a pharos or light-house such as exists on Kedah Peak.

Malacca antiquities, noted by Eredia but to-day unknown, are a "marble bathing tank for princes" at Panchor, and a "sort of royal palace or fort of hewn stone" at Telok Mas. Logan wrote of "tombs of Malayan saints," too, at Tanjong Kling.



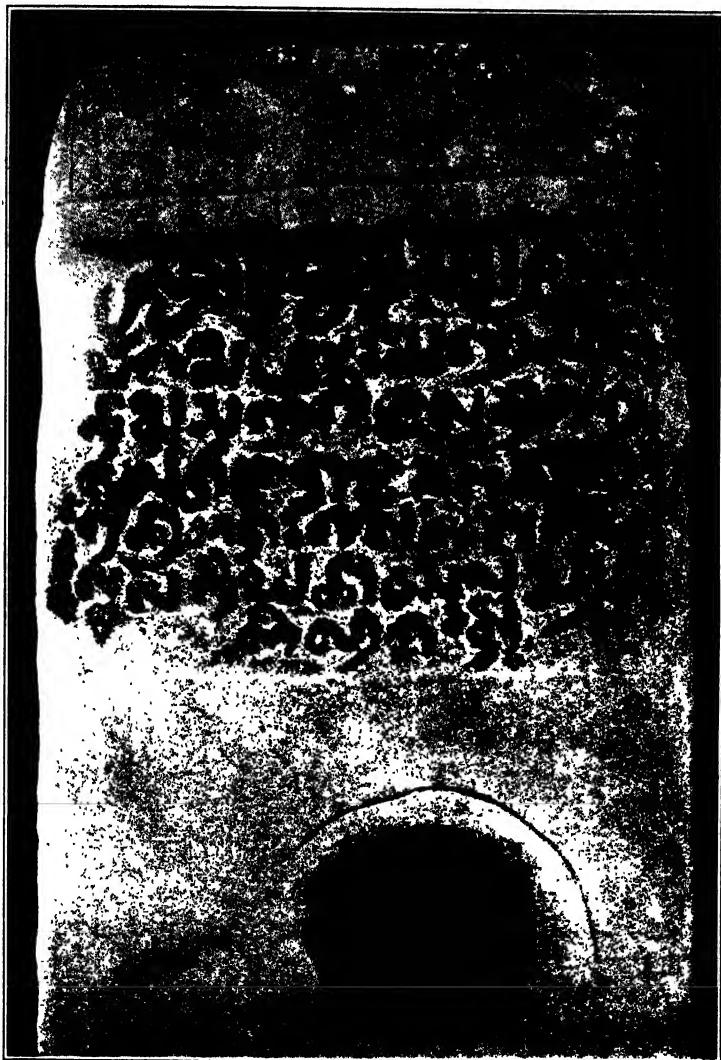
C. Ishii.

THE MAKARA, MALACCA.

On the Residency hill stands a stone figure, which may have formed the bottom of a staircase landing; it is a Makara or fabulous sea-animal, and is of the type found at the Prambanan temple in Java: perhaps it is a relic of the Hindu days of Malacca, though of course it may have been imported from the Netherlands Indies by some Dutch official.

MUHAMMADAN REMAINS.—The most interesting Muhammadan relic is the grave of a Shaikh Ahmad at Pengkalan Kempas, near Port Dickson, dated A.D. 1467 (A.H. 872). There are a laterite tomb,

with an illegible Arabic inscription, a quadrilateral sandstone pillar pierced with a hole supposed to tighten round the arm of perjurers,



PENGKALAN KEMPAS ORDEAL STONE, SOUTH SIDE.

and inscribed on two faces in Arabic-Malay script giving the date and on two in some script of South Indian origin as yet undeciphered except for the date and the words *Ahmad Majana*, "the great

Ahmad," and a group of carved monoliths of local granite with a platform in front of them. On one of the monoliths can be distin-



THE "RUDDER," PENGKALAN KEMPAS.

guished a horse or a pony and above it a bird; on another known as "the sword" are carved the word *Allah*, and, below it, perhaps a phallic emblem or perhaps a representation of the head of Kala found

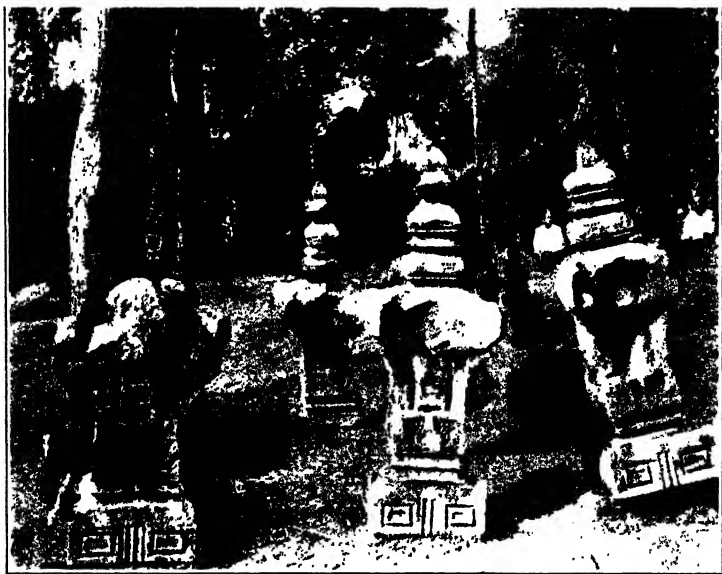
in Hindu remains in Java. It has been recently taken to be a *batu bĕrdagu* of Minangkabau type and compared with the gravestone of



THE "SWORD," PENGKALAN KEMPAS.

prince Aditiawarman at Kubor Raja (A.D. 1378). It is as yet unknown whether the monoliths and the tomb are contemporaneous

or, though the word *Allah* carved in relief is against it, the monoliths antedate the tomb and had the name of Allah added later. The sandstone of the inscribed pillar and of the inscribed capstone of the grave is of the kind said by Malays to have come from Acheh. The saint, as the Arabic inscription of the pillar reminds us, lived in the reign of one of Malacca's most famous rulers, Sultan Mansur Shah, who died in October, 1477, and whose finely carved tombstone, with a text on the side comparing this transitory world to "a house built by a spider," is preserved in Raffles Museum, along with another pierced stone (*batu bértikam*) from Malacca once used, it is thought,



LANTERN TOMBS, PEKAN, PAHANG.

for the taking of oaths. In that museum, too, is the simple tombstone of "Nakhoda Haji of Cambay" (the "son of Jamalud-din"), who died on 9th August, 1459, and presumably therefore at Malacca, this early relic being interesting because the tombs of the first missionaries of Muhammadanism to Sumatra and Java were of elaborate Cambay craftsmanship, and not only did many early preachers of Islam come from that part of India, but, according to D'Albuquerque, Gujaratis from Cambay supplied the Sultans of Malacca with all kinds of arms and artillery. Raffles Museum possesses also another tomb likewise supposed to have come from "the old fort

wall at Malacca," that of one Haji Nasru'd-din, who died on 18th January, 1480 (A.H. 884). Perhaps the last place one would look for Chinese influence would be on a Muslim grave. But certain royal graves at Kota Raja in Aceh and at Pekan in Pahang are clearly modelled on the stone lanterns of Chinese temples. The *Bustanu's-Salatın*, a seventeenth-century work by Shaikh Nuru'd-din (pp. 98, 99), tells how a ruler of Aceh, Sultan Iskandar II, Ala'u'd-din Mughayat Shah (died A.D. 1641), the son of a Pahang prince, Ahmad Shah, who had been carried off to Aceh, sent an expedition to Pahang to take tombstones for his royal ancestors. Perhaps the lantern-shaped tombs in the royal graveyard at Pekan are these very stones, though as yet no names have been deciphered. Another fine stone at Pekan was preserved for centuries at Tebing Tinggi in the sand of the Pahang river; it came from the grave of a Raja Fatimah, who died, according to the inscription, in A.D. 1495, and it is the only known Malay tombstone of true Arabic lapidary style with a Malay inscription. The grave of Sultan Abdu'l-Jamil or *Marhum Shaikh*, who was buried according to the *Sējarah Mēlayu* (chapter 37) at Lubok Pelang(i) in Pahang, has not yet come to light. The graves discovered at Bruas, an ancient kingdom which fell into decay by the beginning of the sixteenth century, are of the ordinary Sumatran type.

PORTUGUESE REMAINS.—A Malay account relates how after D'Albuquerque conquered Malacca in A.D. 1511 the Raja of Portugal ordered that a fort should be built there of ironstone and in the form of the fort at Goa. "The Portuguese who were in Malacca ordered such of the people as had remained there to bring ironstones from Kuala Linggi, Pulau Upeh, Batu Bras, Pulau Jawa a small island near Malacca, from Telor Mas, from Pesan Pringgi, from Pulau Burong and from the interior of Malacca; and the price the Portuguese paid for them was at the rate of \$30 for 100 stones of large size and \$20 for 100 stones of small size. For the eggs they used in their mortar the Portuguese paid at the rate of 2½ cents for each. For lime they paid \$15 a *koyan*; and the coolies employed in digging away the hill were paid half a dollar each for one day's work. During thirty-six years three months and fourteen days the Portuguese were employed in the construction of the fort." This account may not be reliable, but the Commentaries of D'Albuquerque tell us, "Although Ruy de Araujo expected never to find sufficient stone to build the fortress, yet so great a quantity of stone and masonry was discovered in some ancient

sepulchres of bygone kings, which were situated on the land beneath the surface of the ground and in the mosques that were thrown down, that two fortresses might well have been constructed." So the fort *A Famosa* ("The Famous") was built "with two wells within the precincts for drinking water that were there already built with worked stone masonry." On a stone slab D'Albuquerque recorded the names of all the principal men concerned in his conquest, but as this awoke jealousies he set the slab above the gateway with the names turned inwards to the wall and on its outside the verse, "The stone which the builders rejected." Godinho de



PORTUGUESE CHURCH OF ST. PETER.

Eredia and Barretto de Resende have described the fortress in Portuguese days and François Valentyn in Dutch days. Munshi Abdullah in his well-known autobiography records its appearance when the English blew it up and "Malacca lost its glory like a woman whose husband is dead." The one gateway that remains bears the Dutch date 1670. The roofless church on the Residency hill, which D'Albuquerque out of his devotion dedicated to Our Lady of the Annunciation, the Dutch rechristened the Church of St. Paul. There is the Portuguese church of St. Peter. Besides these memorials of Portuguese times, only a few tombstones remain.

Possibly the name Batu Feringgi, on the island of Penang, commemorates some stone set up by early Portuguese voyagers.

DUTCH ANTIQUITIES.—Of Dutch rule in Malacca many traces exist, the principal being the Stadhuis with its old-world vanes and Christ's Church. At Pangkor also there are the ruins of a Dutch fort, which Dampier has described after his visit in 1689. Of the factory at Tanjong Putus on the Perak river no vestiges survive. There is a Dutch fort at the mouth of the Muda river in Kedah and another at Kuala Selangor.

The antiquities of the Peninsula have suffered at the hands of all races; many await exploration and discovery, and most of those which are known will repay further study. It would not be a difficult task to get lists of all old graves and relics, with a record of the local tradition as to their origin, from those invaluable officers, the Malay headmen.

CHAPTER XVI

ADMINISTRATION

THE STRAITS SETTLEMENTS.—Down to 1826 Singapore was under the direct control of the Supreme Government of India, but in that year it was incorporated with Penang and Malacca in one Government, with Penang as the Governor's headquarters. In 1832, when the three Settlements were put under the control of the Government of Bengal, Singapore became the administrative centre.

After the outbreak of the Indian Mutiny, the mercantile community petitioned the House of Commons to be released from the control of the Indian Government, with its autocratic rule, its indifference to local affairs, and its heavy exactions for military, marine and convict establishments. It was feared the three Settlements would be a burden on the Imperial exchequer; but by an Order in Council dated 1st April, 1867, they were established a Crown Colony and transferred to the care of the Secretary of State for the Colonies. The Colony still had to pay for its defence, and after years of dispute as to the amount, the military contribution was fixed in 1895 as $17\frac{1}{2}$ per cent. of its total revenue.

Since the transfer to the charge of the Colonial Office, the Government of the Straits Settlements has been in the hands of a Governor and Commander-in-Chief, who is assisted by an Executive Council and a Legislative Council.

The Governor may make grants of land in accordance with law, appoint Judges, Commissioners and Justices of the Peace, dismiss any officer whose emoluments do not exceed £100 or \$1,000 a year, suspend from duty any officers whose emoluments exceed that sum, pardon offenders convicted of any crime or offence, first consulting but not necessarily following the Executive Council in the case of death sentences.

The members of the Executive Council are the Senior Military Officer in command of the troops, the Colonial Secretary, the Resident Councillor for Penang, the Attorney-General, the Treasurer and the Colonial Engineer. The Council, which cannot meet unless

convened by the Governor, may sit in any Settlement where His Excellency happens to be. Its advice must be sought in all matters of importance that are neither too urgent to be referred to it nor of such a nature that reference would prejudice the public service. If the Governor disregards its advice, the circumstances must be reported to Downing Street. Only the Governor may submit questions for consideration, but if he refuses the written application of a member for the discussion of any matter, the application and the reason for the refusal must be recorded in the minutes, which are forwarded to the Colonial Office every six months.

The Legislative Council consists of the members of the Executive Council and of such official and unofficial members as the Governor in pursuance of instructions of His Majesty the King may from time to time appoint. Unofficial members are appointed for three years but are eligible for reappointment. The Governor presides in the Council, or, if he is unavoidably absent, any member appointed by him in writing. The Legislative Council has power to establish laws and constitute courts of justice and provide for the raising and expenditure of the public revenue. Members may raise for debate any question other than proposals for spending money, which must be made by the Governor. Only in case of emergency and with due regard to the law of England and treaty obligations may His Excellency's assent be given to Ordinances for divorce, for any grant to himself, for increase or diminution in the number and salaries of public officers, for affecting the currency and note issue, for establishing or altering the constitution of any banking association, for imposing differential duties; any Ordinance inconsistent with treaty obligations or interfering with the imperial forces by land or sea, or prejudicing the rights of the Crown or of British subjects not resident in the Colony, or the trade and shipping of the United Kingdom; any Ordinance subjecting persons not of European descent to disabilities not shared by Europeans, and any Ordinance containing provisions to which the assent of the Crown has already been refused. Ordinarily a Bill is read three times, but if the passing of an Ordinance is urgent or no important amendment has been proposed, it may be passed at one sitting with the approval of a majority of the members present. All Ordinances require the sanction of His Majesty the King.

The law in force in the Colony is contained in local Ordinances, and in such Acts of the Imperial Parliament and of the Legislative Council of India as have been made applicable. The Indian Penal

and Criminal Procedure Codes have been adopted with slight alterations, and there is a Civil Procedure Code based on the English Judicature Acts.

The Supreme Court, consisting of the Chief Justice and three Puisne Judges, holds assizes and civil sittings in all three Settlements. It is also a Vice-Admiralty Court and the final Appeal Court in the Colony, though in certain cases appeal lies to the Privy Council. In the Court of Requests a magistrate sits as commissioner in small civil suits. Magistrates' Courts dispose summarily of cases within their jurisdiction. The Justices of the Peace hold a Licensing Court.

The administrative staff consists of the Colonial Secretariat, the Resident Councillors of Penang and Malacca, the various heads of Departments such as the Colonial Treasurer, the Colonial Engineer, the Attorney-General, the Secretary for Chinese Affairs, the Inspector-General of Police, the Principal Civil Medical Officer and the Auditor-General. Some of the heads of the Departments, the Director of Education, the Surveyor-General, the Conservator of Forests, the Director of Agriculture, the General Manager of Railways and the Controller of Labour, are shared with the Federated Malay States, the five last residing at Kuala Lumpur. There are District Officers in charge of divisions in Penang, Province Wellesley, Malacca and the Dindings, whose functions broadly are those described for similar officers in the Federated Malay States.

Singapore and Penang towns are municipalities under unofficial Commissioners, some elected, some nominated by the Governor, with a President seconded from the Civil Service and engineering and medical staffs. In Malacca the Resident Councillor is *ex officio* President of the municipality.

THE FEDERATED MALAY STATES—The highest British authority exercising control over the Federated Malay States is the Secretary of State for the Colonies. Responsibility to Parliament imposes the sole limitation to his powers. He interferes in matters having an imperial interest, and deals with the promotion, appointment and dismissal of the higher officials.

Down to 1895 the Residents of the four States were subordinate only to the Governor of the Straits Settlements, to whom they submitted their journals of proceedings and annual reports and budgets. Often the Governor was ignorant of Malays and their affairs. Anyhow, a lack of roads and railways made extended tours extremely difficult and correspondence was subject to great

delay. Uniformity could be secured only for the broadest principles, so that serious differences existed in the administration of justice, in taxation and in land settlement, and the laws passed by the several States were often discordant. As early as 1893 the Marquis of Ripon proposed the federalisation of Selangor and Negri Sembilan, two contiguous and accessible States. The Governor, Sir Cecil Clementi Smith, welcomed the idea, but advised federalisation of all the States under a Resident-General, the powers of the Governor and the four Rulers to be left unimpaired. In 1895 Sir Charles Mitchell recapitulated the arguments in favour of the scheme,



THE PERAK RIVER, KUALA KANGSAR.

recommending that the Governor should exercise his authority under the title of High Commissioner, that there should be appointed a Federal Council or purely advisory body with no legislative or financial powers, and that there should be one civil service for the whole of the federation instead of officers appointed to the separate States. Mr. Chamberlain, the Secretary of State, approved. Sir Frank (then Mr.) Swettenham was deputed to visit each Ruler and win his consent, a mission that was successful. Sir Frank was appointed Resident-General. Advisory Councils or Durbars were held, in 1897, at Kuala Kangsar in Perak and, in 1903, at Kuala Lumpur. Finally, public opinion demanded that there should be

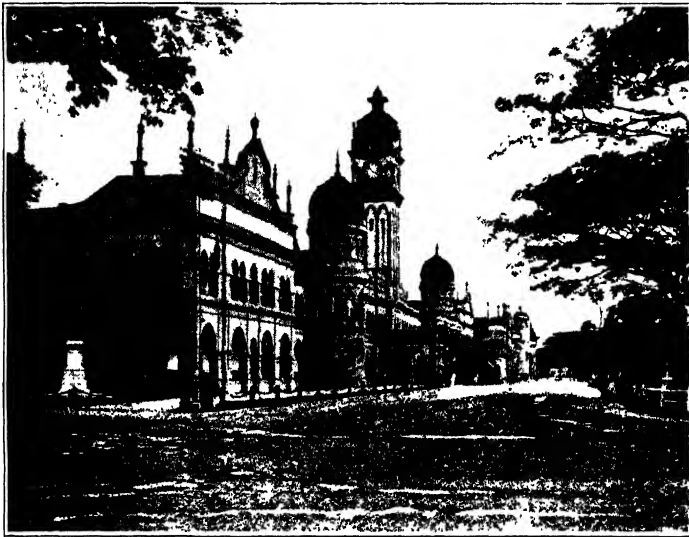
a central body, including representatives of the mining and planting communities, to control finances and direct uniform legislation. In 1909, with the concurrence of the Malay Rulers, a Federal Council was established "for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or in more than one State. . . . Laws passed or which may hereafter be passed by the State Councils shall continue to have full force and effect in the State except so far as they may be repugnant to the provision of any law passed by the Federal Council, and questions connected with the Muhammadan Religion, Mosques, Political Pensions, and Native Chiefs and Penghulus, and any other questions which in the opinion of the High Commissioner affect the rights and prerogatives of any of the rulers, or which for other reasons he considers should properly be dealt with by the State Council, shall be exclusively reserved to the State Councils. The Draft Estimates of revenue and expenditure of each State shall be considered by the Federal Council, but shall immediately on publication be communicated to the State Councils." The High Commissioner, the Resident-General, the four Rulers and their Residents were appointed members of the new Council, and unofficial members were chosen to represent the planting community, the European and Chinese mining communities and the general mercantile community.

Thereafter, the State Councils, composed of the Ruler of the State, the more important Malay chiefs, and generally of representatives of the European and Chinese communities, dealt with confirmation of death sentences, appointments of Kathis and Malay headmen, appeals from the decision of Kathis, applications for the conversion of agricultural into mining land, land in Malay reservations, the banishment of criminals other than Malays and grants for the building of mosques.

The Resident-General had quasi-independent powers, issued instructions in his own name to the Residents who had become his subordinates, and was subject to the control of the High Commissioner only over such matters as he cared to refer. Constitutionally he became the champion of the Rulers against the encroachments of the High Commissioner and the Secretary of State. But the Rulers demurred at the subordination of their Residents to anybody but the King's representative. Improved communications made it easy for the High Commissioner to visit the Malay States.

and the Federal Council was a safe shield for their interests. Accordingly in 1911 the title of Resident-General was changed to that of Chief Secretary, and its holder became the principal adviser of the High Commissioner with duties more secretarial than before. Still he has power to issue instructions to Residents, but they may appeal through him to the High Commissioner.

The Chief Secretary has a secretariat to assist him. Under him are the Federal Heads: the Treasurer, the Legal Adviser, the Secretary for Chinese Affairs, the Controller of Labour, the General Manager of Railways, the Director of Public Works, the Senior



Nakajima.

THE FEDERAL OFFICES, KUALA LUMPUR.

Warden of Mines, the Commissioners of Land, Trade and Customs and Police, the Directors of Education, Agriculture, Posts and Telegraphs and Museums, the Conservator of Forests, the Principal Medical Officer, the Surveyor-General. Each Resident is the highest executive authority in his State. He has a similar staff in miniature: a Secretariat; district officers who are not only magistrates but under the direction of the Resident give out land, collect rents and taxes, control Sanitary Boards and are responsible theoretically for every branch of administration in their districts; assistant district officers in charge of sub-districts or of some department in a large district; State heads of the Treasury, the Public Works,

the Mines, Police, Education, Forests, Medical and other services. Many Malays of good birth become assistant district officers and assistant magistrates, and some have risen higher.

There is an independent judiciary under a Chief Judicial Commissioner. The Courts in the States are—(a) the Supreme Court, comprising the Court of a Judicial Commissioner and the Court of Appeal; (b) the Courts of Magistrates of the first and second class; (c) the Courts of the Kathis dealing with Muhammadan divorce; and (d) the Court of a Malay headman or Penghulu. The Court of Appeal consists of two or more Judicial Commissioners under the presidency of the Chief Judicial Commissioner. There is a final appeal in civil matters to the Privy Council. The judicial system seems extravagant to those acquainted with the Indian system, but extension of the powers of Malay magistrates, for example, is rendered difficult by the numerous races in the country.

The towns are under the control of Sanitary Boards, to which Government appoints not only officials but members of the public, and it is considered that even the biggest townships still require so much Government assistance that it would be injurious and inadvisable to constitute them independent municipalities.

As occasion arises, Boards and Committees that include members of the public are appointed by Government to advise on such matters as agriculture, education, anti-malarial measures and so on.

CHAPTER XVII

REVENUE AND EXPENDITURE

STRAITS SETTLEMENTS.—The revenue of the Colony of the Straits Settlements has shown an enormous increase since the beginning of the present century. In 1901 the revenue was \$7,041,686 (about £700,000); by 1911 it had grown to \$11,409,221 (£1,331,075); and collections in 1920 amounted to \$42,469,620 (£4,954,789), a phenomenal increase in the past decade.

The principal items of revenue are from Income Tax and Government Monopolies.

In accordance with the "free port" traditions of the Colony, import duties are few and affect almost entirely articles of luxury. They are, in fact, confined to liquors, tobacco and petroleum, and in 1920 produced 13 per cent. of the total revenue.

Expenditure also has expanded enormously during this century. In 1901 the expenditure amounted to \$7,315,001 (about £720,000) in 1911 to \$9,085,389 (£1,059,962), and in 1920 to \$39,260,318 (£4,680,370). It has, however, to be remembered that 1920 was an abnormal year in regard to expenditure, owing to heavy losses on sales of rice and a munificent contribution from Colony funds to the Imperial Government that far exceeded the Defence Contribution payable annually by the Colony.

FEDERATED MALAY STATES.—The expansion of the revenue of these States since Federation in 1896 has been very remarkable.

In 1897, the first complete year after Federation, the total revenue amounted to \$8,296,687, equivalent then in sterling to some £825,000. In 1920 the revenue collected was \$72,277,146, equivalent to £8,432,333. Expressed in revenue per head of population, this means that, whereas the revenue in 1897 was about \$15 (£1 10s.) per head, it had grown in 1920 to about \$55 (or £6 10s.) per head.

Expenditure has more than kept pace, so far as expansion is concerned, with revenue; the payments of 1897 amounting to \$8,795,313 (about £850,000) and those of 1920 to \$100,433,471 (or £11,717,238).

The country in 1921 suffered from the world-wide depression of trade, which affected adversely its two principal exports, tin and rubber, and the revenue of 1921 will fall very far short of the high-water mark of 1920.

An export duty on tin has always been important, though its proportion to the total revenue has dropped considerably. In 1897 it produced almost one-third of the total revenue of the Federation; in 1920 it was little more than one-sixth. The export duty on rubber is comparatively recent: it accounted for 6 per cent—of the total revenue in 1920.

Seeing that \$160,000,000 (£18,666,666) of the savings of the country have been expended on a network of railways, which extend into all the adjoining parts of British Malaya, it is not surprising that railway receipts bulk large and, in fact, provided almost one-quarter of the total revenue for 1920.

CURRENCY.—The currency in use throughout British Malaya is that of the Colony, the standard coin being the Straits Settlements dollar.

The silver dollar is rare in towns, the Straits Settlements Government paper currency being used almost entirely for the larger cash transactions. The 50-cent piece is, like the dollar, legal tender to an unlimited extent, and there are silver subsidiary coins of the values of 20 cents (about 6d.), 10 cents (about 3d.) and 5 cents (about 1½d.). There are also 5-cent nickel coins in circulation, which were first issued to the public in 1921, but have not so far attained any considerable measure of popularity. For the smallest cash transactions bronze coins of 1 cent (about 1 farthing) and copper coins of ½ and ¼ cent in value are in use.

Noteworthy is the predominance of paper currency. In 1917, owing to the draining of the country of its small silver coins as the result of the high price of silver, an issue of 10-cent notes was necessitated, and these small-value notes still form a very great proportion of the “small change” carried in the pockets of the public.

Before 1906 British Malaya was, from the currency point of view, a “silver” country, and its exchange rates with London fluctuated with the sterling value of silver. In 1906 the Straits Settlements dollar was given a fixed sterling value of 2s. 4d., and since then telegraphic exchange rates on London have fluctuated only within the very narrow limits of one farthing on either side of 2s. 4d.

CHAPTER XVIII

COMMERCE AND TRADE

THE ports of the Straits Settlements are free ports: the only duties levied being those on alcoholic liquors, tobacco and petroleum sold for consumption within the Colony.

The trade is to a large extent a distributing trade, and is centred in Singapore. The volume of trade and shipping at this port is surpassed by few ports in the East. The distribution trade is made up of articles which merely change bottom at the port and of articles which after importation are handled and then re-exported. No statistics are kept of the former class, but of the latter statistics are kept, and they show that in certain articles the trade is enormous.

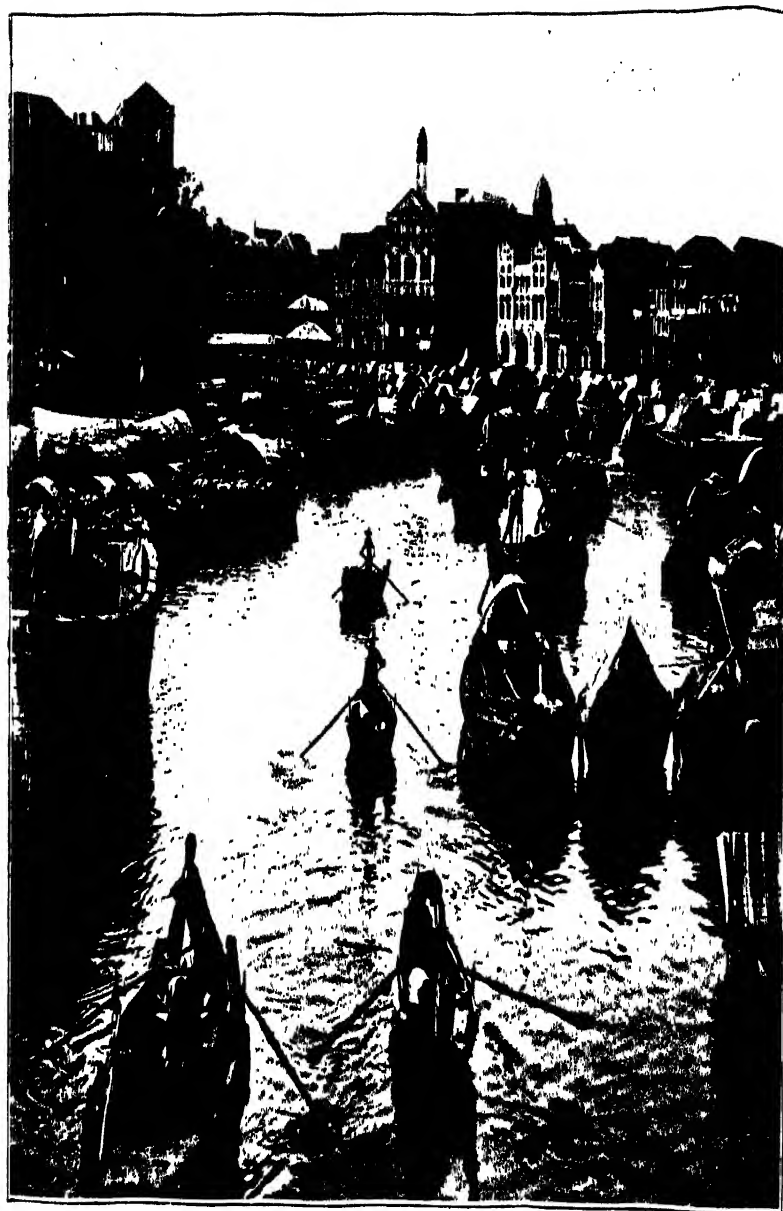
Nearly all the tin ore obtained in the Malay Peninsula, and a considerable proportion of the rubber grown there, are brought into the Straits Settlements, where the ore is smelted; and from Singapore and Penang the tin is exported mostly to the United Kingdom and to the United States of America. Of the rubber, some is sold before export, and some exported to other countries for sale or on consignment. The rubber auction market in Singapore grew rapidly in importance during the War.

The great volume of the trade is with the United Kingdom, but there is also a very large trade carried on with the Netherlands East Indies.

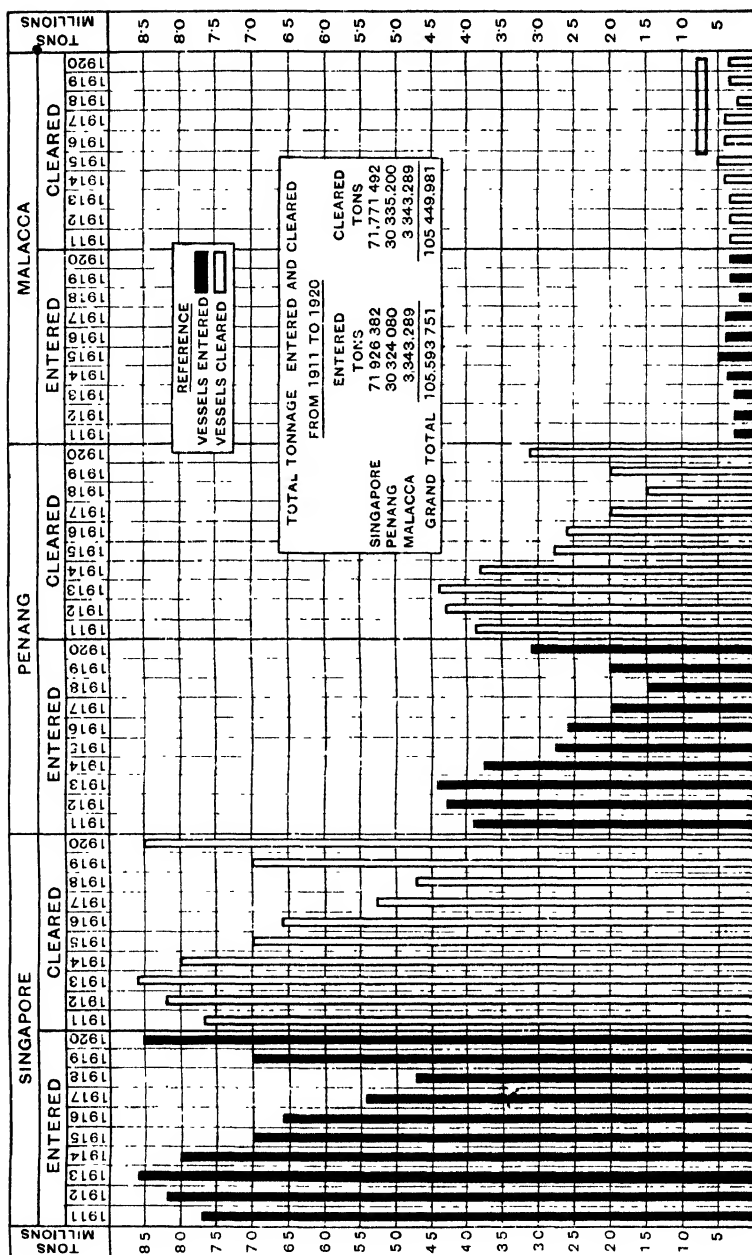
Rubber and tin form the principal articles of export, but there is a considerable export of copra, rattans, pepper, tapioca and preserved pineapples. For the canning of the latter Singapore is famous.

Owing to its geographical position, Singapore is an important coaling station. Not only is it directly on the main steamer routes, but it is well placed for obtaining supplies of coal from India, Borneo, Japan and Australia. About four-fifths of the coal imported into the Colony is exported in ships' bunkers.

Singapore is also one of the largest distributing centres for oil and oil fuel in the world. The traffic is almost entirely in the hands of the Asiatic Petroleum Company.

*Nakajima.*

SINGAPORE RIVER.



British Malaya is not self-supporting, and imports of foodstuffs form nearly half the total imports in value.

The figures of imports and exports given on p. 181 show the extent to which trade expanded during the last thirty years; but whereas during the twenty years from 1890 to 1910 the total trade increased by 150 per cent., during the ten years from 1910 to 1920 it increased more than 230 per cent.

The Federated (and Unfederated) Malay States form the hinterland of the great entrepôt of Singapore.

The port of the Federated Malay States is Port Swettenham, where there is sufficient water to float the largest ocean-going steamers. In 1921, 294 ocean-going steamers, of a total tonnage of 1,178,603 and belonging to sixteen different lines, cleared from this port. But a considerable trade is done through Penang and Singapore, with which the Malay States are linked by rail.

Rubber and tin are the chief products from the Federated Malay States. The value of tin-ore exported in 1921 was £5,828,372, the price of the metal being very low for the whole year. The actual quantity of para-rubber exported in 1921 was 94,522 tons, a large number of estates having voluntarily restricted their output. The gold output for the same period was 14,674 ounces, valued at £59,097. Fifty-five tons of wolfram ore, valued at £2,156, and 73,101 tons of coal, valued at £75,876, were exported. Exclusive of minerals and rubber the main products exported are: copra, valued at £883,132 for 1921; jungle produce, consisting of timber, rattans, gutta-percha and so on; fish, both fresh and salted; pepper, gambier, tapioca, sugar and also rice, though the quantity of rice imported far exceeds the quantity exported.

The aggregate value of trade, inclusive of bullion and re-exports, for the year 1921 was £27,824,766. It was, however, a time of great trade depression and the above figure cannot be regarded as normal. In 1920 the aggregate value of trade was £54,253,352. The following are the values of imports and exports of merchandise for the last five years:

				<i>Imports.</i>			<i>Exports.</i>		
				£	s.	d.	£	s.	d.
1917	..	..	..	8,547,201	5	0	31,736,011	13	4
1918	..	..	..	8,720,921	10	8	26,024,399	11	4
1919	..	..	..	13,866,412	11	8	32,565,761	5	0
1920	..	..	..	19,894,247	13	8	33,683,498	2	0
1921	..	..	..	12,006,735	13	0	15,104,105	11	4

IMPORTS INTO THE STRAITS SETTLEMENTS.

<i>For the Year</i>	<i>From the United Kingdom.</i>	<i>From British Possessions.</i>	<i>From Foreign Countries.</i>	<i>Total of Merchandise.</i>	<i>Bullion and Specie.</i>	<i>Grand Total.</i>
1890	19,863,380	39,352,276	72,064,298	131,279,954	16,017,363	147,297,317
1900	29,398,636	71,230,801	179,232,134	279,861,571	34,228,289	314,089,860
1910	38,493,030	171,279,297	136,021,917	345,794,244	18,676,409	364,470,653
1920	157,151,927	455,972,213	451,588,184	1,064,712,324	205,499,855	1,270,212,179

EXPORTS FROM THE STRAITS SETTLEMENTS.

<i>For the Year</i>	<i>To the United Kingdom.</i>	<i>To British Possessions.</i>	<i>To Foreign Countries.</i>	<i>Total of Merchandise.</i>	<i>Bullion and Specie.</i>	<i>Grand Total.</i>
1890	24,759,547	18,807,835	63,925,961	107,493,343	20,430,339	127,923,682
1900	59,662,175	31,924,292	148,034,155	239,620,622	22,993,993	262,614,615
1910	77,820,951	86,316,503	143,162,297	307,299,751	16,890,035	324,189,786
1920	107,696,763	238,249,930	532,936,791	878,883,484	145,162,094	1,024,045,578

STATEMENT SHOWING THE VALUE OF IMPORTS INTO THE FEDERATED MALAY STATES DURING
THE YEARS 1917, 1918, 1919, 1920, AND 1921.

<i>Countries whence Imported.</i>	1917.	1918.	1919.	1920.	1921.
	\$	\$	\$	\$	\$
Singapore	35,172,591	32,110,100	57,227,791	65,495,361	41,303,923
Penang	20,589,709	21,408,902	29,842,066	43,277,349	20,438,824
Malacca	1,146,361	592,404	864,261	466,600	453,501
United Kingdom.. ..	7,288,620	8,543,243	11,948,241	31,503,464	26,597,475
Other British possessions ..	2,657,225	2,768,436	4,324,110	20,638,884	4,967,430
Foreign countries	7,943,076	9,939,094	15,289,138	14,535,054	9,251,453
Total ..	74,797,582	75,362,206	119,495,607	175,916,712	103,012,606

STATEMENT SHOWING THE VALUE OF EXPORTS FROM THE FEDERATED MALAY STATES DURING
THE YEARS 1917, 1918, 1919, 1920, AND 1921.

<i>Countries to which Exported.</i>	1917.	1918.	1919.	1920.	1921.
	\$	\$	\$	\$	\$
Singapore	145,663,354	133,558,229	150,738,194	163,801,772	81,667,293
Penang	78,567,749	69,086,924	64,721,952	65,815,869	32,391,387
Malacca	10,299,660	6,753,178	11,836,963	5,954,269	3,655,526
United Kingdom.. ..	31,287,832	10,286,557	44,894,896	46,601,653	14,100,589
Other British possessions ..	2,058,059	871,045	2,419,621	2,132,460	1,025,457
Foreign countries	4,187,446	3,092,578	5,040,857	4,805,993	2,645,124
Total ..	272,064,100	223,648,511	279,652,483	289,112,016	135,485,376

At the last census the population of the Federated Malay States was returned at 1,298,292, on which basis the distribution of trade per head of population in 1921 came to £22 3s. 4d. It will be observed that the trade figures for 1921 show an excess of exports over imports of £3,788,490. The declared values of the main classes of imports for 1921 were as follows:

	£
Live animals, food, drink, etc.	5,580,201
Raw materials	1,202,714
Manufactured articles	5,223,820
Coin and bullion	11,403
Total	£12,018,138

The table on p. 182 would show that the trade of the Federated Malay States is almost entirely within the Empire. It is to be remembered, however, that most of the trade with Singapore and Penang is purely a transshipment trade, and that in cases of transshipment these two centres are not the true ports of origin in respect of Federated Malay States imports or the true ports of destination in respect of their exports. But the bulk of the Federated Malay States trade is with countries within the Empire, and the tendency is for this trade to increase at the expense of foreign trade. Countries within the Empire are showing themselves fully alive to the possibilities of the Malayan market. A trade commission from Canada has been accredited to Singapore, while a trade delegation from West Australia recently toured the country.

CHAPTER XIX

MINING

GOLD.—At Selinsing, a place not far from the Jelai river of Pahang a little below Kuala Serau, there are remains of old gold workings said by Malays to have been made by “men of Siam.” The workings are reported to prove considerable mechanical skill, and may have been made seven or eight centuries ago by people of the Mon race before the coming of the present Siamese. How old these workings at Selinsing are we may never know, but it is pretty certain that in the fifteenth century gold mining was in progress in Pahang. Barbosa, the earliest Portuguese writer on Malacca (A.D. 1518), speaks of Pahang as having much base gold. Godinho de Eredia, writing about 1600, gave sensational details of a vein of gold a yard wide being sent to Joas de Silva, Governor of Malacca, “as is well known to those of that time, it having happened in the year 1586.” Elsewhere this author has stated that Pahang had as much or more connection with the west as with the east coast by way of the low watershed between the Muar and Serting, and it is probable that most of the Pahang gold was taken to Malacca. In 1727 Captain Alexander Hamilton described how Malays dived for gold in Pahang, and he gave the output as more than eight hundredweight of gold in some years, or about half the highest recorded output of 1897. In his book, published in 1839, Newbold wrote: “The annual produce of gold from the Malayan Peninsula, on a rough estimate, amounts to 19,800 ounces. It is chiefly got at Ulu Pahang, Trengganu, Kelantan, Johol, Gemencheh and Jelai, at Pekan and Batang Moring, and other places at the foot of Mount Ophir.” He relates how the Penghulu of Johol killed the mines in his district by sending five or six buffaloes a year to them, receiving for every head of cattle two *tahils* of gold! At the present time gold mining has declined and tin mining has far surpassed it in importance.

The only European mines now working are the Raub Australian Gold Mines in Pahang, where water-generated electric power has

enabled the Company to keep costs low. In 1920 these mines produced 12,023 ounces of gold.

The Perak gold comes from native workings near Tapah. Native workings elsewhere have either been idle or produced gold for local use only. Ground-sluicing and shafting are the usual methods of winning the ore.

Attempts have been made to dredge the rivers of Kelantan for gold without marked success. Pulai, on the southern boundary of that State, was once a well-known gold-mining centre. Close to the Kelantan border, Tomoh, in Lower Siam, has long been noted for native gold-mining. Until recent years the industry was financed by one Raja Ah Fat, a Chinese Muhammadan who ruled at Tomoh, and his gold-mining operations extended into the Ulu Pergau of Kelantan as far as the Temengor river in Upper Perak, though to-day there is little activity in Tomoh and no gold-mining in Upper Perak. There is no reason to suppose that the gold deposits are exhausted, but the general prosperity of the country and the attraction of rubber have tended to make Malays and Chinese neglect an industry on which the poor nature of the ground allowed only small returns. When Tomoh was at its best, the Chinese coolies' earnings are said to have averaged only 50 cents a day each.

At Tomoh and Panchor, a neighbouring village, small gold-bearing reefs have been found. In Pahang, apart from the Raub mines, several reefs have been exploited at Selinsing, Tui, Punjum and Kechau, but costs proved too high for profitable working. In Negri Sembilan reefs have been worked unsuccessfully at Pasoh, Chindras and Batu Bersawah.

The following are the official figures for gold placed upon the market from the Federated Malay States during three recent years:

	1918.	1919.	1920.
	<i>Ounces.</i>	<i>Ounces.</i>	<i>Ounces.</i>
Perak	1,237	1,091	1,338
Negri Sembilan	38	33	9
Pahang	17,034	15,278	11,476

TIN.—The Chinese chroniclers, writing at the beginning of the fifteenth century, record how “tin is found in two places in the mountains in Malacca and the king has appointed officers to control the mines. People are sent to wash it, and after it has been melted

it is cast into small blocks weighing one *kati* eight *tahil*, or one *kati* four *tahil* official weight; ten pieces are bound together with rattan and form a small bundle, whilst forty pieces make a large bundle. In all their transactions they use these pieces of tin instead of money." D'Albuquerque relates how he suppressed the Malay tin coinage current in Malacca when he conquered it in 1511 and minted a Portuguese tin coinage in its stead. Early Chinese chronicles tell how tin was among the articles of export from Johore and Pahang. Barbosa speaks of the "much and good tin" won in Selangor and taken to Malacca, where it was "used and sold to many countries." In the seventeenth and eighteenth centuries (p. 137) the Dutch sought strenuously to keep a monopoly of the tin produced in Kedah and Perak. Hamilton wrote that Perak "produces more tin than any other country in India," and towards the end of the eighteenth century its annual output was estimated at 5,000 *pikul*, which had risen to 8,500 *pikul* in Newbold's time, the bulk of it won by Malay miners in Kinta, Batang Padang and at a few places on the Perak river. In Klang and Selangor also tin was mined, though on a lesser scale. Intan in Upper Perak and Bundi in Kemaman have been producing the ore for more than fifty years. In the early nineties there were some 350 private Malay mines in Kinta "all for stream tin washed out of the river-bed sand." It was the discovery of the Larut tin fields by the Chinese in the middle of the nineteenth century that led to British interference in Perak. Many fields, however, are of even more recent date: for instance, Mersing in Johore, and Blat and Gambang in the Kuantan District of Pahang.

The following are the chief localities where tin is worked now:

1. On the Perlis-Setul border in the limestone hills.
2. Near Changloon in North Kedah.
3. The southern slopes of Kedah Peak.
4. The hills north of Baling in Kedah.
5. Intan in Upper Perak.
6. Near Temengor in Upper Perak.
7. The Larut district of Perak.
8. Salak North and Sungai Siput in the Kuala Kangsar district of Perak.
9. The Perak river valley at Bekor.
10. The Kinta district of Perak.
11. The Main Range in the Batang Padang district of Perak and in Ulu Selangor.

12. The Kuala Lumpur and Ulu Langat districts of Selangor.
13. The neighbourhood of Seremban and Mantin in Negri Sembilan.
14. The Jelebu and Kuala Pilah districts of Negri Sembilan.
15. Mersing, in Johore.
16. On the Endau in Pahang and Johore.
17. On the Pontian in Pahang.
18. Blat and Gambang in Pahang.
19. Sungai Lembing near Kuantan in Pahang.
20. The Main Range near Bentong in Pahang.
21. Bundi and Sungai Ayam, Kemaman.

And there are other places where tin mining is prosecuted on a small scale.

Of the individual tin fields, the Kinta district is by far the greatest producer, though once Larut held that position. In 1919 and 1920, however, Gopeng alone in the Kinta district had a larger output than the whole of Larut. In Selangor the Kuala Lumpur district is the greatest producer, followed by Kuala Kubu in Ulu Selangor.

In Pahang the tin ore won in the Kuantan district in 1919 and 1920 was a little in excess of that in Ulu Pahang.

The importance of European capital and modern methods of working the tin deposits has been increasing steadily during the thirty-two years shown in the chart. But in 1920 the amount of tin ore recovered from mines under Chinese management was still 64 per cent. of the total, in 1919 it was 68 per cent. and in 1913 74 per cent. Many have smiled at the rough methods of the Chinese and at the now moribund superstitions of Malays and Chinese about tin mining, but although the Chinese miner has worked over much ground imperfectly and waste has sometimes resulted from poor concentration, yet his mobility, the small returns on which he can live, his industry and his willingness to undertake manual labour anywhere with a cheerful disregard of the dangers he creates for himself unless strictly watched, enable him to challenge comparison with the efforts of highly capitalised companies, hampered by expensive plants and the necessity of large profits to produce dividends to satisfy their numerous shareholders. Chinese mining in the Malay Peninsula might be better and the Chinese owe much to tuition from white miners, but there are places where their activities succeed after modern plants have failed to pay. No tin-mining proposition is too small for the Chinese or their womenfolk; if they cannot do better, they wash up odd scraps of ore in old mine-holes or other

[illegible][illegible]

people's tailings, and all the ore pays duty to the Government when it passes to the exporter. The white miner must be assured of a considerable quantity of ore before he begins operations.

The amount of tin mining done by Malays and the aborigines is very small. Malays own some mines but there are few localities where they ever work them. Aborigines bring a little ore from distant parts of the mountains to the towns. Aborigines, Malay and Chinese, however, have done most useful work in prospecting difficult country. White miners depend largely on them for news



A TIN-MINE, GOPENG, KINTA.

of fresh deposits to work. In prospecting, the numbers and the mobility of the Asiatics are of the greatest value.

Chinese tin mining is carried on mostly where the ore is in detrital deposits or where lode formations are softened by weathering on the surface. The ore is won by opencast operations, by ground-sluicing or by shafting, but the last process is economical only when the amount of barren overburden above the ore is very thick and too costly to remove in opencast work

The opencast mines (*lumbong*) are excavations made from the surface and have to be kept dry by bailing or pumping. In the smallest excavations a kerosene tin slung on strings and handled by two men is often used for bailing. A bucket swung on one end

of a beam, weighted at the other end, is another simple device. The Chinese *kinchar*, or box-pump, a clumsy but cheap machine, is commonly employed. In the larger excavations steam-pumps are installed. The overburden is removed in two shallow baskets slung on a stout stick and carried by coolies or by trucking. The tin-bearing ground is similarly dealt with, or by gravel pumps. But in clayey ground miners operating on a small scale frequently lift



A CHINESE BOX-PUMP, KAMPAR.

the pay-dirt by bailing it up a series of steps, after puddling the clay at the bottom of the mine with water until it is liquid enough to be easily handled: on each of the steps are a cavity, which will hold the liquid mud, and a miner with a small bailing-tin on a pole for lifting the mud from his pool to the one above until it reaches the washing-box. The washing-box (*lanchut*) is shaped like an open coffin. At the head a cross-piece of planking holds up a supply of water that is allowed to flow into the lower part as required, the

tin-bearing ground being raked to and fro until sufficiently concentrated. Rough concentration only is effected in these boxes: the final concentration, whereby the heavier impurities are removed, is done by specially trained men.

At Tronoh and Tambun in Kinta were the largest opencast mines under European management, but Tambun has been exhausted, and at Tronoh only part of the old workings are in operation. The



A TIN-MINE, KINTA.

largest opencast mines now in European hands are those worked by the Lahat Mines Limited in Kinta and the Sungai Besi Mines Limited in Selangor. On up-to-date opencast mines elevating is done with trucks drawn by steam or electric power by means of hydraulic elevators or by gravel pumps.

In opencast mines the ore has to be raised to the surface or near the surface for concentration. In ground-sluicing, or *lampan*

working, water is brought to the tin-bearing ground and concentrates the ore by flowing over it, the lighter particles being washed away. The usual practice is to lead the water to ditches into which the pay-dirt is washed by the stream. Washing boxes may be placed in the ditches where convenient, or the rough concentration may be effected by washing the sand in the ditches in a wooden pan (*dulang*).

Hydraulic mining is *lampan* working intensified. Water is brought from a distance in pipes and discharged under pressure from cannon-like monitors, which play jets of water on a hill-face, breaking down the ground and conveying the stanniferous soil to sluices where the ore is separated. There is a group of hydraulic mines at Gopeng that are probably the most successful ventures of their kind in the world. They are Gopeng Consolidated, Kinta Tin Mines, Tekka and the Société Française des Mines d'Étain de Tekkah. Another French Company, the Société des Etains de Kinta, has its headquarters a few miles away at Kampar.

Deep mining is confined almost entirely to Europeans. The deepest tin mines are at Sungai Lembing in Kuantan, where the Pahang Consolidated Company works several lodes and has one shaft 1,600 feet below the surface. These mines were worked formerly on their outcrops by Chinese. They are in altered sedimentary rocks resembling the "killas" of Cornwall, but some have been followed down into granite. They are not only the most important lode mines in the Peninsula but among the most important deep tin mines in the world.

The most recent and most economic method for treating low-grade tin propositions on alluvial plains is bucket dredging, which obtains especially in Larut and Kinta.

Electric magnets are employed nowadays to remove some of the heavy impurities from tin ore.

A few decades ago the miner used generally to smelt his own ore. Now most of the output is smelted in the Colony.

The following table is compiled from the Annual Reports of the Advisers to show the recent output of tin ore in the Malay States outside the Federation:

		1918.	1919.	1920.
		<i>Pikuls.</i>	<i>Pikuls.</i>	<i>Pikuls.</i>
Johore	..	39,420	31,019	26,640
Kedah	..	18,068	11,799	8,653
Perlis	..	2,596	1,896	4,346
Trengganu	..	10,194	10,580	8,117
Kelantan	..	—	25	40

WORLD'S OUTPUT OF TIN FOR THE LAST TEN YEARS (1911 TO 1920) SHOWING PERCENTAGE IN TONS
(2,240 POUNDS) OF FEDERATED MALAY STATES' OUTPUT TO THE TOTAL.

	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
<i>British Empire:</i>										
Federated Malay States ..	44,148	48,420	50,126	49,042	46,766	43,870	39,833	37,370	36,934	34,934
Unfederated Malay States	1,100	1,227	1,240	1,595	3,041	3,340	3,063	2,880	3,302	2,832
Total ..	45,248	49,647	51,366	50,637	49,807	47,210	42,896	40,250	40,236	37,766
Australia	7,500	7,194	8,072	5,460	5,489	5,450	4,500	4,313	4,000	4,178
South Africa	2,000	1,745	2,251	2,024	2,057	1,928	1,574	1,300	1,250	1,526
Nigeria	1,400	2,020	3,732	4,300	4,837	5,755	5,820	5,740	5,110	5,250
Cornwall	4,872	5,254	5,288	5,056	4,968	4,697	3,936	4,000	3,350	2,915
Other countries	500	593	646	634	839	760	965	800	960	1,200
Total ..	61,520	66,453	71,355	68,111	67,997	65,800	59,691	56,403	54,906	52,835
<i>Foreign Countries:</i>										
Bolivia	22,434	22,657	26,326	21,996	21,444	20,720	26,813	28,200	27,500	21,000
Dutch East Indies ..	20,000	19,912	20,500	17,973	19,523	19,548	18,746	20,000	19,600	21,400
China	8,000	8,644	8,255	7,097	7,880	7,503	11,618	8,400	8,800	11,300
Siam	6,000	6,587	6,748	6,391	9,000	8,765	9,154	9,000	9,000	10,000
Other countries	500	600	600	700	700	800	800	1,000	1,000	1,000
Total World's Output	118,454	124,853	133,784	122,468	126,544	123,136	126,822	123,003	120,806	117,535
Percentage of Federated Malay States to total	37.3	38.8	37.5	40.0	37.0	35.6	31.4	30.3	30.5	29.7

MALAYA

TUNGSTEN ORES.—The price of wolfram and scheelite has declined so much that little is being done with these minerals to-day, but during the great European War large supplies came from near Changloon in North Kedah, from the Kinta and Batang Padang districts of Perak, and from Selangor, Negri Sembilan and Trengganu.

The following are the figures for the production of tungsten ores:

	1918.	1919.	1920.
	<i>Pikuls.</i>	<i>Pikuls.</i>	<i>Pikuls.</i>
Perak	2,515	4,074	3,650
Selangor	3,004	2,186	1,641
Negri Sembilan ..	435	1,063	1,054
Pahang	17	—	—
Johore	11	5	—
Kedah	8,730	3,542	709
Trengganu	10,368	9,408	2,567

COAL.—The only coal mine working is at Rawang in Selangor. The output for the last four years was:

1917	..	..	..	155,279 tons.
1918	..	..	..	168,740 „
1919	..	..	..	191,293 „
1920	..	..	..	247,917 „

The greater part of the output is used by tin miners, the local railways being the next largest consumer.

CHAPTER XX

AGRICULTURE

So far as Europeans are concerned, agriculture in Malaya to-day centres in the cultivation of the PARA RUBBER tree (*Hevea brasiliensis*), introduced from the region of the Amazon in South America. The Asiatic also cut down mangosteen and mango, coconut and betel palm; and took up fresh land to plant this modern "pagoda tree," and a large area of small holdings is under Para. The remarkable rise and progress of plantation rubber was due, of course, mainly to the development of the motor transport industry and the absorption of raw rubber in the manufacture of tyres. And although at the moment owing to the condition of the world's trade the value of the product is low, yet since the year 1906 the story of Para in British Malaya, as in several other Eastern countries, has been the greatest romance in the history of tropical agriculture.

Next, but very far behind, comes the COCONUT palm, which is cultivated mostly on the alluvial soils of the coast.

The planting of wet RICE is the principal agricultural pursuit of the Malay.

In importance and in extent of area cultivated rubber, coconuts and rice are the three staple agricultural products of British Malaya, other crops being at present comparatively insignificant.

The whole of the area under cultivation was formerly covered with heavy forest, which has been felled and burnt to make way for the several crops. Almost all the area now under rubber consisted of virgin jungle immediately before it was planted up, although on a few large European and Asiatic estates other crops had been grown for some years. Before 1906 sugar, coffee, sago, tapioca, gambier, pineapples, spices, pepper, nutmegs, cloves, rice, coconuts, bananas and a variety of tropical fruit trees were planted. Recently there has been a revival of pineapple cultivation and of the pineapple canning industry in Singapore. But the local markets bear witness to the decline of interest in fruit culture. The island of Penang was once famous for its nutmegs but the output has greatly decreased. And the cultivation of tapioca was prohibited in many

districts owing to its exhausting effect on the soil, unless manure is used. The wonderful success of Para rubber, the ease with which it can be planted as a permanent crop, the comparatively high



S. Kurita.

A KING COCONUT.

price of the commodity, captivated the imagination of planters, and only the present slump is allowing attention to turn to the possibilities of other crops.

In any description of the agriculture of a country, climate and

rainfall are of primary importance, but these have been dealt with in another chapter.

Second, or even equal in importance, is the question of soils. The soils in Malaya may be divided roughly into (a) the laterite, clay, loam soils of the undulating and hilly areas of the interior; (b) the alluvial deposits of the coast or river banks, which are generally of a heavy type and often merge into dense, sticky clays; and (c) the peat soils found chiefly in the coastal districts, overlying clay, and also in swamps inland. The undulating and less steep areas of the interior are the most suitable for rubber which, although it requires much moisture, is intolerant of a per-



BURNING A FOREST CLEARING.

manently wet or damp soil or a high-water table, such as is often present in the low-lying districts on the coast. Coconuts, however, will flourish far better on flat alluvial soil, provided the drainage is satisfactory. Peat soils are not as suitable for any type of cultivation, unless before being planted they are opened up and drained for some time to allow the peaty surface layer to become consolidated.

Rubber planters especially have paid scarcely enough attention to the problems of soil conservation on undulating or hilly land and of drainage on flat lands. The heavy rainfall of Malaya causes a great wash of soil from slopes and hills unless steps are taken to

prevent it. Broadly these steps consist of contour blind draining, terracing, blinding, silt pitting and the cultivation of permanent or semi-permanent cover crops, or of a combination of one or more of these methods according to circumstances. Drainage problems on the heavy soils in the flat areas equally deserve care, particularly where crops are deep-rooted.

Other problems now engaging attention are the breeding of pure and high-yielding strains by seed selection or vegetative propagation when applicable, methods adopted already in the case of Malaya's three staple crops. Furthermore, rubber, coconuts and rice have



A RUBBER PLANTATION.

led to a close study of pests and diseases, which occur invariably when any crop is grown on large contiguous areas.

A vital factor in the cultivation of rubber and coconuts in Malaya is labour. The indigenous population of Malays is neither sufficient in number nor suited in many respects for employment on the larger estates; the Malay hates permanent routine work. On European estates the labour force is composed almost entirely of Tamil, Chinese and Javanese immigrants. By far the larger proportion of estate labour consists of Tamils, who, while less capable of heavy work than the Chinese, are in most ways quite satisfactory, after being trained. The Chinese coolie, as a rule, is more intelligent

and independent, and prefers contract work to daily or monthly rates of wages. All labour is now free, and the coolie may be said to be well protected and cared for not only by the Government but by managers of estates also, since the importation of labour from India is not inexpensive.

The local Malay agriculturist is either a rice-planter or a small-holder owning a few acres, on which fruit trees, coconuts and rubber



AFRICAN OIL PALM.

grow in confusion, generally untended, together with such catch-crops as vegetables, ground-nuts, pineapples, bananas and so on, where the shade produced by the permanent crops is not too great. As a rice-planter, the Malay is fairly successful within the limits of his agricultural knowledge. Market gardening is left to the Chinese.

Many other besides its three staple crops are known to be suitable

for Malaya, although the economic side of their cultivation awaits investigation. It has to be remembered, too, that often, if many individuals cultivate the same crop, the result is to swamp the market and reduce the value of the product below the cost at which it can be grown profitably.

The following are brief details of crops which have been and can be grown—their cultivation depends mainly on the market value of the produce.

Owing to the recent increase in the manufacture and consumption of margarine prepared from vegetable fats, it is probable that coco-



MANILA HEMP.

nuts will be more remunerative than in the past, and that the cultivation of the AFRICAN OIL PALM, which yields palm oil and palm-kernel oil, will prove a successful commercial proposition under plantation conditions in Malaya. This palm has been planted already on several large estates.

Attention is being directed to FIBRE PLANTS, such as Sisal hemp (*Agave sp.*), Mauritius hemp (*Furcraea sp.*), Bowstring hemp (*Sansevieria sp.*), Manila hemp (*Musa textilis*), and Roselle (*Hibiscus sabdariffa* var. *altissima*), but a commercial stage has not yet been reached. Experiments in the cultivation of cotton have been started. The Kapok or silk-cotton tree (*Eriodendron anfrac-*

tuosum) is found scattered about the country and grows well, but it is remarkable that the product of this tree is being imported into the Peninsula from Java. Kapok is used chiefly for stuffing mattresses and lifebelts and so on, and is not suitable for spinning.

The cultivation of LIMES (*Citrus acida*) for the production of raw or concentrated lime-juice, and of calcium citrate or citric acid is promising and has been taken up recently.

Other crops, whose successful cultivation is bound up with the problem of the production of power alcohol as a substitute for petrol, are the STARCH-YIELDING CROPS: tapioca (*Manihot utilisima*), yams (*Dioscorea* sp.), sweet potatoes (*Ipomea batata*), and Jerusalem artichokes (*Helianthus tuberosus*). It is too early to make definite statements with regard to these.

The NIPAH PALM (*Nipah fruticans*) is indigenous and common, especially along the banks of tidal streams. The sap obtained by tapping its fruiting stalk is rich in sugars, and may be used either for the manufacture of the sugar or its fermentation to alcohol. The possibilities of this crop are being investigated.

Another important indigenous plant, which is now being cultivated to a small extent, is the GUTTA-PERCHA tree (*Palaquium* sp.). Gutta-percha is extracted from the young twigs and leaves. The gutta-percha at present exported is obtained by tapping the wild jungle tree. (Seventy years ago the principal supply was obtained by aboriginal collectors in Johore.) It is probable that other local or indigenous plants may prove to be worth cultivation.

So far only one TEA plantation has been started in the country quite recently, and this is situated on the plains. The Department of Agriculture is experimenting with this crop at an elevation of about 2,000 feet.

Some fifteen years ago the finest prepared TAPIOCA in the world was manufactured in Malaya. The climate and soil are well suited to the cultivation of this crop, but it has an exhausting effect on the land. There has been a revival lately in tapioca planting, but at present it is mostly favoured by Chinese. The market price fluctuates considerably.

Years ago there were large areas planted with PINEAPPLES, chiefly by Chinese, in the State of Johore and the Island of Singapore, and the canning industry in Singapore for the export of the tinned fruit was considerable. The industry almost died out, but has been revived lately, although pineapples are being grown mainly as a catchcrop among young rubber.

The cultivation of GAMBIER for the preparation of cutch or gambier by extracting the leaves and stems with water, was formerly important, but now there are only one or two Chinese estates in the State of Johore; the price is said to be not very remunerative.

Malaya produced a fair amount of COFFEE before the introduction of rubber. A disastrous outbreak of disease and other causes.



NIPAH PALMS.

however, practically ruined the industry. Coffee is still grown, but chiefly as a catchcrop on rubber estates.

The CASTOR-OIL plant (*Ricinus communis*), although known to flourish, has not been much cultivated until recently. Any definite statement as to its economic value must await further experiment.

PATCHOULI (*Pogostemon patchouli*), CITRONELLA GRASS (*Cymbopogon nardus*), and LEMON GRASS (*C. citratus*) were formerly planted,

but their cultivation has almost died out. Citronella grass is now grown chiefly to prevent the wash of soil on hills, but it is doubtful if the distillation of the oil will be a profitable industry at present. The cultivation of patchouli is being revived.

In India GINGELLY is cultivated by the natives but, though it will flourish, it has not been planted on any scale in Malaya. The GROUND-NUT (known also as the monkey-nut or pea-nut) does well. It is planted by Chinese and Malay gardeners and sold in the local markets as a foodstuff: Chinese oil mills in Penang and Singapore import seed for the manufacture of gingelly oil. The COCA or COCAINE plant (*Erythroxylon Coca*), which yields the drug, can be grown with success, but its cultivation is prohibited by the Government. The CINCHONA tree, of course, yields quinine, which is used so much for the treatment of malaria. It is being grown experimentally at a height of some 2,000 feet, but it is probable that loftier elevations will be more suitable. Its cultivation may be taken up by the Government to obtain enough quinine for local use. The TUBA plant (*Derris elliptica*), the roots of which have been used in Malaya chiefly to stupefy fish, is being cultivated on a larger scale. It is employed as an insecticide by Chinese vegetable gardeners and also as an ingredient of cattle dips in Europe.

A number of SAGO PALMS are found scattered through Malay villages, and are sometimes cut down and the sago extracted. Most of the so called sago sold in the market is tapioca. The leaves of this palm are used for thatching (*atap*). SUGAR PALMS (*Arenga saccharifera*) also are found throughout the Peninsula, and are used by the Malays chiefly for the preparation of a crude sugar for local consumption.

Before 1910 there were extensive SUGAR-CANE (*Saccharum officinarum*) plantations in at least two large districts. To-day the industry is dead, but attempts are being made to revive it, the main difficulty being the large capital required for the necessary machinery. If the industry is revived, high yielding and good strains will have to be selected and methods that have been perfected in other sugar-cane growing countries applied. At present different varieties are grown by gardeners on a very small scale, the cane being sold in the local markets and not converted to sugar.

Apart from pineapples and limes, which are being grown on an industrial scale, almost all FRUIT trees and plants are being cultivated on small-holdings and are of importance only for the local market. It is probable that the planting of fruit trees could be

stimulated by encouraging the manufacture of jam and pickled fruits and so on. A number of different varieties of bananas.



SAGO PALMS.

for example, are grown and utilised locally, but the problem of cultivation for export has not yet been considered.

Until the later stages of the war, no attempts had been made to

cultivate CEREALS, other than wet and dry rice, and, on a small scale, maize. It has been shown, however, that the following can be grown successfully: Italian millet (*Setaria italica*), Bulrush millet (*Pennisetum typhoideum*), Little millet (*Panicum miliare*) Kodo millet (*Paspalum scrobiculatum*), Sorghum (*Sorghum vulgare*), Ragi (*Eleusine coracana*). The chief drawback was found to be attacks by birds and insects. Except at a time of food crisis or under compulsion, it is unlikely that the cultivation of these cereals will be popular. Tapioca, the Jerusalem artichoke, sweet potatoes and yams, which have been mentioned as possible producers of



MALAYAN FRUITS.

alcohol, are also useful food products and are grown locally as such. ARROWROOT too can be grown successfully, and is cultivated to a small extent by Chinese. The following pulses—Green gram (*Phaseolus mungo*), Black gram (*Phaseolus mungo* var. *radiatus*), Pigeon pea (*Cajanus indicus*) and Rangoon bean (*Phaseolus lunatus*)—can be grown and are of value as food adjuncts.

Several varieties of CHILLIES are grown locally but not on an adequate scale, since dried chillies are imported from India. GINGER and TURMERIC are grown by market gardeners and used as ingredients of curry stuffs. The BETEL-NUT or ARECA-NUT palm is cultivated extensively on native holdings, especially in the State of Johore and

in Malacca. The fruit is used throughout Malaya and other Eastern tropical countries as a masticatory. The CINNAMON tree will flourish, but at present it is cultivated only on an experimental scale. The CLOVE tree was formerly grown extensively on the Island of Penang and in Province Wellesley, but its cultivation has decreased greatly. Early in the last century the East India Company imported from Amboyna a number of NUTMEG plants into Penang, and in 1818 the trees were introduced into Singapore also. In 1842 the produce of nutmegs and mace from the Straits Settlements more than equalled the whole consumption of Great Britain. The nutmeg tree is still grown, chiefly on the island of Penang. PEPPER, too, used to be planted extensively in different parts of the Peninsula, but its cultivation has almost ceased now.

CHAPTER XXI

INDUSTRIES

MALAYA is not a manufacturing country, although there are a number of small local industries, many connected with agriculture. The principal raw products used in the manufacture of various articles are tin, rubber and copra.

Tin ore is smelted on a large scale but, apart from an infinitesimal quantity of pure block TIN used by local Chinese for making certain artistic tobacco boxes, candlesticks and other ornaments, all the tin is exported to be manufactured outside Malaya. The making of articles from old kerosene tins may be mentioned as a very minor industry.

Almost all the RUBBER prepared on estates is exported as raw material. The preparation of this is hardly an industry proper, since only a little raw rubber is utilised in commerce and even that little undergoes further treatment outside the country, as, for example, when it is employed for the inner layer of submarine cables. There are three small local factories in which tyres and various other rubber goods are made. Only one is of any importance, but it is hoped that the local manufacture of rubber will extend in the not distant future.

The manufacture of COIR rope and matting from the fibrous husk of the coconut has been attempted, but so far as is known the industry does not now exist, and the husks are either returned to the soil to rot or burnt as fuel for drying copra. Coir rope and matting are actually imported. The meat or flesh of the coconut fruit known as COPRA is nearly all exported as raw product, although there are several oil-expressing mills at work in the Peninsula and a certain amount of coconut oil is exported.

OIL MILLING may perhaps be called one of the local industries, although it is as yet comparatively small. Hydraulic oil mills for the expression of coconut oil from copra exist in Singapore, Penang and Selangor. Ground-nut oil also is expressed chiefly by Chinese. To a less extent and somewhat spasmodically, owing to the irregularity of the supply of seed, illipe oil is manufactured,

In the case of both ground-nuts and illipe seeds the raw material is imported. A few other oils are expressed from time to time, but at present these are of minor importance. There are also many small native oil expressers (known as Chekus) scattered about the country, and owned chiefly by Tamils. These consist essentially of a large wooden pestle and mortar driven by bullocks. Coconut oil and gingelly oil are expressed in these mills. It is hoped that, with the development of the cultivation of the West African Oil Palm, the expression of both Palm Oil and Palm Kernel Oil may become an industry. The distillation of ESSENTIAL OILS, chiefly citronella lemon grass and patchouli, was important some ten years



A PLANTER'S BUNGALOW.

ago as a minor industry, but is now almost defunct, although the patchouli plant is grown and the dried leaves exported.

PINEAPPLE CANNING once flourished in Singapore and has recently shown signs of revival. So far there are some six or more factories in Singapore and two in Johore. They must be situated not too far from the estates, since the fruit has to be canned within two or three days after picking. The pineapples are canned whole, in slices and in cubes, and, like other fruits, are preserved in a solution of sugar. All the tins or cans are made in the local factories from tin plate imported from England.

The preparation of TAPIOCA, granulated, bullet, pearl or seed, and

in the forms of flour and flakes, may be classed as an industry, since it constitutes the manufacture of a finished food product. Tapioca factories are usually erected on or near tapioca estates. In its first stage the process resembles the manufacture of starch or flour from other starchy root crops such as potatoes. The large tubers, after being dug up, are washed, peeled, sliced and ground, and the starch is separated from other debris in revolving sieves, and then allowed to settle in large tanks, for several days, with several changes of fresh water. The starch is dried artificially at a not very high temperature. Granulated, bullet and seed tapioca are prepared from the partially dried flour or starch by special methods: the whole manufacture, however, is done by hand labour, after the starch has been obtained. Another industry that obtained formerly in Singapore was the manufacture of SAGO flour and pearl or seed sago from the starchy pith of the sago palm. There are still many factories in Borneo, Sarawak and other places. Sago, too, is manufactured entirely by hand labour, mainly by Chinese.

The TANNING of hides for the preparation of leather was a minor native industry and still exists on a very small scale in a few localities.

A somewhat crude spirit, known as SAMSU and consumed mostly by Chinese, is manufactured under Government licence in different parts of the country. The raw material used is chiefly broken and waste rice, that is fermented to alcohol directly in one operation by "rice-ferment cake" imported from China. This ferment contains a mixture of species of fungi (*Mucors*) and yeasts, and appears to be very inefficient. The modern "Amylo" method of fermentation, employed successfully in France and Belgium, is an improvement of this process. TODDY is made by fermenting the sugary sap obtained from tapping the young shoot or spathe of the coconut palm, and also to a less extent of several other palms, like the sugar palm and the *nipah* palm, but its preparation can scarcely perhaps be described as an industry. The manufacture of both sugar and industrial alcohol from the sap of the flowering shoots of the *nipah* palm is being investigated with promising results.

The manufacture of SUGAR from the sugar-cane was an important business in two or three districts in Malaya about ten years ago, but the industry has died. Attempts are being made to revive it. Small quantities of crude brown sugars are manufactured for local consumption from the sugary saps of the coconut, *nipah* and sugar palm.

The adaptable Chinese have engaged on a small scale in the manufacture of SOAP from local oils, chiefly coconut oil, but the industry is insignificant.

During the last few years Chinese have started the manufacture of CIGARS and CHERROOTS from imported tobacco; for hitherto only a small quantity of native tobacco has been grown in the Peninsula.

There are many large RICE MILLS in which the locally grown grain is milled. In addition, small hand mills and mills driven by water power are used by Malays and Chinese. The small mills consist of a wooden pestle and mortar.

The making of THATCHING (*atap*) from the fronds of different indigenous palms, especially the sago and *nipah* palms, may be considered a local native industry.

Machinery and plant have been introduced recently for making concentrated LIME-JUICE and allied products from lime-fruits.

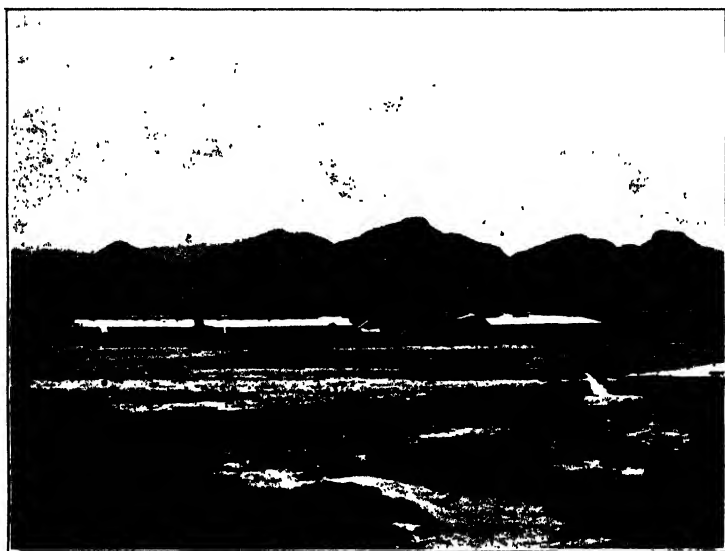
Next come the forest industries. In every large town in the Peninsula furniture and many other articles are made from the RATTANS so common in Malayan forests. This industry is in the hands of Chinese, who are adept in copying any designs which they are shown. Cool and cheap, rattan furniture is to be found in every European bungalow. Furniture of all kinds, carts, wooden clogs, buckets, tubs and many other articles are manufactured from local woods entirely by Chinese, and like rattan furniture in comparatively small shops. Railway coaches are built in the workshops at Kuala Lumpur from MALAYAN TIMBERS.

Hitherto the Malay States have depended on other countries for MATCHES, but a plant for their manufacture is being erected. It is proposed to use wood from suitable local trees. In 1920 the value of matches imported was nearly \$700,000.

The extraction of resins from various woods, the collection of dyes and the manufacture of wood charcoal also come under forest industries.

It has been long known that CHINA CLAY or kaolin is plentiful in the Federated Malay States. As far back as 1887 an attempt was made to work the clay in Larut, but it was abandoned as the deposit was thought to be too coarse in quality. In 1900, however, it was considered that the failure of the attempt was due, not to the quality of the clay, but to inexperience and lack of skill on the part of those engaged in the work. With the assistance of Government further experiments were made on a deposit near Kampar, but again ineffectually. In 1904 the Government Geologist re-

ported that the clay was as good a clay as could be desired, and in 1914 an investigation of the industry in China corroborated the favourable prospects of Malaya's clay deposits. In 1920 a company was formed and a modern refining plant erected at Gopeng in Perak, and the export of refined clay has already begun. Malaya's China clay would appear to be equal in quality to the best European China clay. Apparently all the raw materials necessary for the manufacture of PORCELAIN and POTTERY are to be found in the neighbourhood of Gopeng, so that it is hoped that soon all articles of pottery and porcelain for the use of the peoples of Malaya will



POTTERY WORKS, GOPENG.

be made locally. Again, for many years BRICKS and TILES have been manufactured from beds of clay, Chinese probably being the pioneers. The clay used to be puddled by water buffaloes and the bricks made by hand, but about 1892 the Public Works Department of Selangor introduced brick-making machinery, which produced a far superior article, though Chinese still follow their old methods. In 1915 a new process was introduced by which tiles similar in size to the so-called Marseilles tile are made of concrete. They are said to be lighter and to absorb less moisture than the clay tile. Drain pipes, well blocks, floor tiles and ridge tiles also are made of concrete. EARTHENWARE jars, drain pipes, flower pots

and so on are also manufactured in the Peninsula. Sand and limestone frequently occur close together in various parts of the Malay States, and a plant for making SAND-LIME BRICKS is being erected. Sand is mixed with a certain proportion of burnt limestone, and the mixture is then pressed by machinery into bricks that are subsequently submitted to a high-pressure steaming process, whereby a chemical reaction occurs between the sand and lime, resulting in bricks of great strength. About 1910 works were opened for the manufacture of CEMENT from limestone and clay. The plant, which is under European supervision, can turn out in a day of twenty-four hours some fifty tons of Portland cement for local use. A little MARBLE is quarried in the limestone hills, and cut up and dressed as paving for floors, gravestones and so on.

A little GLASSWARE is manufactured in Penang, and there is a small local factory for remoulding bottles and lamp glasses.

Among minor industries may be included the manufacture of aerated waters, ice, bread, vermicelli, vinegar, pickles and jam.

Although there is no large factory, boots and shoes, both leather and canvas, are made by the Chinese in every town.

CHAPTER XXII

SEA - FISHERIES

EVERY ocean has its own fauna, and though fishes may steer without hindrance from China to Peru, yet the movements of most are restricted to definite areas, so that species rare or unknown in the China Sea will swim in large shoals in the Indian Ocean and contrariwise. Accordingly the thousand miles of coastline of the Malay Peninsula, which, terminating in the most southerly point of the continent of Asia, divide the Indian Ocean from the China Sea, bring the fishermen the rich and varied harvests of two seas. Local species of the sea-perch family include the cockup (*siakap*, Malay) of Calcutta and the Queensland groper (*kurrapu*, Tamil; *kërapu*, Malay; *kurapa*, Brunei; *garropa*, Philippines) and the black-spotted rock-cod of Australia. Passengers on steamers passing the eastern entrance to Singapore Roads will see a crowd of canoes in the deep-water channel and hear the noise of rattles wielded incessantly by the Malay fishermen to keep themselves alert to hook, the instant there is a bite, the rapid predacious gigantic herring (*parang-parang*), which ranges as far west as the Red Sea and as far east as Japan.

Of the many hundred species of fish found in Malayan waters few are incredible. Most poisonous kinds, such as the globe-fish and porcupine-fish (*buntal*), though of uninviting appearance, may be eaten by those who know how to excise their poisonous organs. The principal economic fishes are pomfret (*bawal*), flat-fish (*ikan lidah*, *ikan sa-bëlah*), mackerel (*tënggiri*, *tongkol*), horse-mackerel (*chëncharu*, *sëlar*, *daing bëlang*, *chërmin*, *talang*), herring, sea-perches (*siakap*, *kërapu*, *ikan merah*) and sea-breams (*kërisi*). The pom-frets have an ovine habit of huddling together, and are so stupid that the noise of clappers and the splash of paddles will make them dash into the net. Of flat-fish there are some twenty species in Malayan waters, two of them called respectively the Queensland halibut and the flounder on the Australian coast; they keep close to the bottom of shallow waters, where an enormous quantity of their

immature fry is destroyed in seine and purse nets. Sea-going fishing smacks should do a good trade with catches of bonito, tunny (*tongkol*) and Spanish mackerel (*tenggiri*), the last especially a delight not only for the epicure but also for any angler who may fish for him with plenty of line off the east coast in a north-east monsoon. Members of the horse-mackerel family compose the bulk of the fish netted on that coast for drying and salting. Everywhere the herring family is large and important, its members ranging in size from the huge *parang-parang* (*Chirocentrus dorab*) through shads (*tërubok*), sprats, sardines (*tamban*) and anchovies (*bunga ayer*) down to the white bait (*bilis*) which in bottled form are known as Macassar red fish. The roe of the shad (*tëlor tërubok*) is a highly valued delicacy, and many shads are caught off Sumatra and their roes dried and salted for export. Some of the largest and most palatable of Malayan fishes are the sea-perches, which include the crimson *ikan merah* (*Lutianus spp.*) so popular in Singapore. Of the sea-brems, the beautiful little *kërisi* (*Synagris spp.*), of roseate hue with yellow and silvery bands, are angled for during the south-west monsoon on the sandy-bottomed grounds off the east coast by the Malay princesses of Pahang when they are bound on a picnic at sea. But the fish that provides the finest sport to the east coast Malay is the grey mullet (*bëlanak*, *këdëra*, *anding*). When the rivers are in full flood, the sun obscured, the monsoon blowing half a gale, the surf thundering on the beach and full of yellow yeasty foam that provides food or shelter for the mullet's eggs, the Malays troop down to the shore to swing their nets over the crests of the tall wave just when it stands like a wall between the shy shoal and the brown gladiator of the casting-net. Unfortunately, as there are no restrictions of size or season, grey mullet are getting scarcer every year. Of the habits and distribution of the red mullet (*biji nangka*) in Malayan water little is known and they are not yet of commercial importance. Whiting (*bulus-bulus*) is a common market fish, and can be got all the year round, though never in large quantities. Both the Malay varieties, whether young or adult, are very timorous, and instantly bury themselves in the sand even at the shadow of a passing cloud. Whiting fishing is perhaps the nearest thing to trout fishing that the sea-angler can get: a light rod, fine tackle, bait of prawns or small bivalves, and the flood tide over shallow sandy flats are the requisites. Very common is a Jew fish, the *gëlama*, huge shoals of which are taken by Trengganu and Kelantan folk in deep-

water hauling-nets, and salted and dried for export as a condiment for curry. One of the best-known members of the *Scopelidæ* is the *lumi* or *luli*, which Malays disregard on account of its soft flesh but Anglo-Indians prize in the dried and salted shape of Bombay duck. The gar-fish, gar-pike and flying-fish family (*Scombresocidæ*) include the belone (*todak*), of which a curious Malay legend is told. Once these fish assailed old Singapore, stabbing to death every person on the shore, until a boy suggested a fence of banana stems in which their beaks would stick. The advice of the infant prodigy was followed, but he was put to death for fear he might grow up too wise! To-day the Malay fisherman angles for the shy and wily belone with a kite from which dangles a fine line with a baited noose; the fish makes a fierce dash at the bait, the noose tightens round his upper jaw and his recurved teeth prevent it from slipping. Given a breeze to keep the kite flying, the fisherman may catch a dozen or more in an hour. Strange species, which deserve brief mention though of little economic value, are the blowpipe fish (*sumpît-sumpît*), large mouthed but with the projecting lower jaw of the true cuspidore artist, which kills insects near the surface of the sea by shooting water at them; the grunters (*gěrul-gěrul*), good food fishes named after the noise that protests against their capture; the sail-fish (*ikan selayar*), of which a specimen three fathoms long was sold lately in a Singapore market; the gobies and tiny mud-skippers (*těmbakul*, *bělachak*), that plant their pectoral fins firmly on the mud-flats, raise their heads and survey their surroundings, while breathing through an organ in the tail. Among valuable food fishes sharks and rays hold a high place. In Madras they are known as milk-producers and, salted, are considered a nutritious food for nursing mothers. Sharks' fins are sold in the local market or dried and exported to China, where they are deemed a great delicacy. Hitherto the trade in fish oil has attracted little attention in Malaya, though oil valuable for medicinal purposes, skin dressing and the making of soap is obtained in other countries from the livers of sharks and rays and the dressings at fish-markets. The value of fish-skins is unknown locally, though by recently invented processes the skins of sharks and rays can be converted into leather and their intestines into the finest kid. Fish-maws are exported to China and to Europe for the manufacture of isinglass; they are the sounds or air-bladders of the cat-fish, the conger-eel and the thread-fish.

There is no space here to deal with crabs, prawns, cray-fish,

pearl oysters, edible oysters, scallops, cockles, corals and sponges. A pearl valued £800 is reported from the Kelantan coast. Rock oysters flourish, but as no native will wait the three years it takes them to mature they are almost unknown in the markets. In the Philippines sponges are grown like flowers from cuttings.

The people of the Malay Peninsula still employ only primitive methods of fishing such as obtained at the time of the Apostles, so that this side of sea-fishing belongs rather to ethnography than to modern industries. "When Singapore had been in existence eight months," writes Munshi Abdullah in his Autobiography, "there came fishing boats from Malacca to do line-fishing, and they



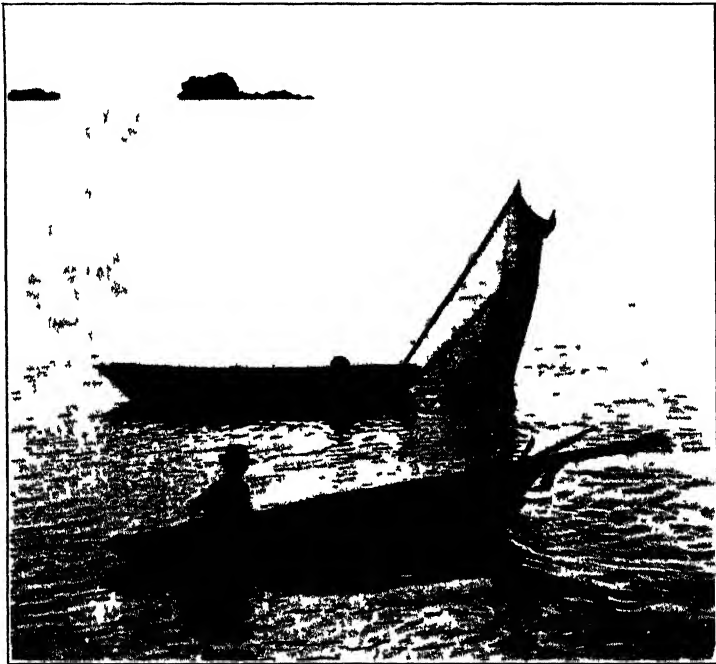
CHINESE FISHING VILLAGE

caught an immense number of *parang-parang*, which were then very tame seeing that they had never been caught with a hook, and people fished for them within twenty or thirty fathoms of the shore. Before that Singapore men did not know any way of catching fish but by spearing them. After Singapore was a year old, there came a Malacca man, Haji Mata-Mata, and made fishing stakes known as *kelong* and *bêlat*, and others came and made *jěrmal*. When the fishing stakes were first built, a great many fish were caught off Telok Ayer, *těnggiri* innumerable, so that they could not all be eaten, and the fish were thrown away and only the roes were taken and salted in barrels and sold to the ships." Broadly, one may divide local methods of fishing into traps that a fish can enter

but cannot leave, nets that entangle, angling with hooks, and imprisoning by weirs and barriers. The large fishing-stake traps of the Malays are based on three principles. In the first type (*jěřemal*) the fish are headed by converging rows of stakes into a large enclosure where there is a submerged screen or carpet of split rattan; the screen is raised and the fish in it are caught. In the second type, of which there are many kinds (*bělat*, *kelong*, *sirok*), the fish are headed into successive compartments of diminishing size till they reach the inmost, when the entrance is closed and the fish are caught either by being left high and dry at low tide or by the use of a casting-net or landing-basket, or by raising a submerged screen and so bringing the catch to the surface. The third type of trap (*bělat lengkong*) consists of a long row of rattan screens fastened to upright bamboos in shallow water and cutting off a segment of beach, which as the tide recedes is covered with fish left on the mud or in tiny pools. The nets used in Malayan waters may be divided broadly into drift-nets (*pukat*, *jarėng*), seine or drag nets (*pukat tarek*; *pukat China*), fixed purse-nets, the bell-like casting-net (*jala*), and ground or lifting nets (*tangkul*). The drift-net is laid across channel or tideway, where the strong current carries fish into it. The drag-net is laid in a semicircle off the land and is then slowly drawn ashore by a gang of men. Fixed purse-nets are worked mainly by Chinese for catching shrimps, prawns and fish-fry to feed pigs and geese and to make manure. In the estuarine type (*ambai*) the purse-net is at the vertex of two converging lines of stakes which head the fish into it. The marine purse-net is set in tideway or current, one kind (*gombang*) tied to stakes, the other (*pompang*) anchored.

The only important fish that lays eggs on the sea-floor in comparatively shallow water is the true herring. So, as the eggs of most marine fish are pelagic—that is, are buoyant and float—it is incorrect to speak of spawning grounds on the coast. But though at the breeding season these fish migrate far out to sea against the prevailing monsoonal current, their eggs are brought back by the denatant drift, and probably myriads of small fry produced from these eggs are destroyed in the several thousand purse-nets employed by the Chinese. Another enemy of fish on the west coast is mining silt. This silt has destroyed not only fresh-water fishes like the carp, but also such marine fishes as the shad, which if silt prevents it from ascending a river must spawn either in the sea or in polluted estuaries, when the eggs perish. There are not less

than five hundred species of fish economically important in Malayan waters, and much research is required for the discovery of the location of a species in full roe, its spawning place, the recruiting ground of the young fry, and the times and places of its seasonal migrations—all information necessary for conservancy and to secure for the fishermen catches in the best condition and the largest quantities. The Fisheries Department has recently turned its attention to marine biology and valuable results may be expected



C 1st 2

MALAY FISHERMEN, MALACCA

As regards railway and coal storage facilities the fish trade of Malaya is in its infancy. Hundreds of tons of prime fish are caught every year on the east coast of the Peninsula where the inexhaustible supplies of the China Sea are available, but though taken within twenty-four hours' steam of Singapore it is all dried for export owing to lack of cold storage transport. Moreover, the dangerous river bars and the heavy breakers on the shallows prevent fishing during the north east monsoon. Perhaps in the future these difficulties may be solved by the use of steam trawlers and the

establishment of cold-storage depots on the islands which are dotted all up that coast.

“Fish,” it has been well said, “are not a luxury but a necessity of life with rice-eating peoples.” In 1920 over 5,000 tons of dried and 7,000 tons of fresh fish were forwarded to stations in the Federated Malay States; in addition to that there was the sea-borne fish of the Straits Settlements, Kelantan, Trengganu and Pahang. Fishing is the main occupation of some 30,000 Malays in Trengganu, who are not only the most expert fishermen in the Peninsula but have not yet been ousted by the Chinese who dominate the west coast. The value of fish exported from Trengganu to Singapore in 1920 was just under £30,000. Yearly in the south-east monsoon Trengganu men financed by Chinese traders will sail off to Singapore, the Dindings and even Penang to pursue their craft.

CHAPTER XXIII

COMMUNICATIONS

FOR centuries RIVERS were the only important means of internal traffic in the Peninsula. The names of many States—Perak, Selangor, Pahang, Kelantan, Trengganu and Johore—have been taken from these “strips of daylight” (as Malays term them), along whose banks the first comers settled with their backs to dark, impenetrable, trackless forest. As early as the fifteenth century there was communication across the watershed of the Serting between the old Malay kingdoms of Malacca and Pahang. At the beginning of the seventeenth century the Dutch factors at Patani used an overland route from there to Kedah. And there was an old trade route from Kedah to Singgora. But it was only after the establishment of British rule and protection that metalled roads and railways were built.

First tin mining and then the rubber-planting industry led to the construction of extensive and excellent ROADS, the best of granite, which abounds, the less frequented of red laterite.

A trunk road runs from Prai, opposite the island of Penang, through Province Wellesley, Perak, Selangor and Negri Sembilan down to Tampin, a distance of over 300 miles. From Tampin a length of thirty-nine miles down to Gemas on the Johore frontier is being constructed. When this last stretch is completed and the Johore road system links up with it, through communication by road from Prai to Singapore will be open on the western side of the Peninsula.

There are several roads across the Peninsula: the most northerly from Alor Star, the capital of Kedah, to Singgora in Siamese territory; another from Port Swettenham in Selangor, through Kuala Lumpur and Kuala Kubu, over the Semangkok pass down to Raub, Benta and Jerantut, and thence over the Pahang river to the port of Kuantan on the east coast; and a third, the most southerly, is being built from Batu Pahat across Johore to Mersing.

The mileage of metalled roads in the Federated Malay States alone amounts to 2,395 miles inclusive of the trunk road.

From Taiping, the capital of Perak, roads radiate to Selama and Ijok, Matang and the Dindings; from Kuala Kangsar, the home of the Sultan, a road runs to Grik in Upper Perak; from Ipoh, the centre of the Kinta tin-fields, roads radiate to all the mining townships of the district—Chemor, Gopeng, Kampar, Lahat, Batu Gajah and many other smaller places; in Batang Padang there are roads to the mining centres, Temoh and Chendriang, and from Bidor down to Telok Anson, the Perak river port, and thence to Bagan Dato' at its mouth.

In Selangor the principal circuit road connects Kuala Selangor with Kuala Lumpur and Klang, *via* Rawang, where coal-fields are being worked. Another important circuit road runs from Kuala Lumpur to Klang, *via* the coast, Sepang and Kajang. There is a road from Kuala Lumpur over the Genting Simpah pass to Bentong in Pahang. And there are many access and branch roads.

In Negri Sembilan the principal road circuit is from the capital, Seremban, by way of Jelebu to Kuala Pilah, and thence to Tampin on the main trunk road. Within that circuit is a road from Seremban to Sri Menanti and Kuala Pilah, which passes through scenery more beautiful than any other on the roads of the west coast States, except perhaps the scenery of the pass between Taiping and Kuala Kangsar. A main road connects Seremban with Port Dickson, and there is an alternative road to the main trunk road leading into Selangor from Nilai. There are various cross and access roads, and a fine flat road along the beautiful sandy coast.

In Pahang a road runs from Benta on the main cross road down to Kuala Lipis, the present capital at the confluence of the Jelai and Lipis rivers. From Bentong a road runs into Negri Sembilan past Durian Tipus and Pertang to Kuala Pilah. A road is being built from Temerloh to the east coast railway. From the port of Kuantan there is a road to the fishing village Beserah.

Outside the Federated Malay States, the road systems of the Colony, 583 miles in total length, are small, and those of the Protected States await development.

There is a road round the Island of Penang, passing through glorious prospects of sea and hills and rice-fields, hardly to be surpassed in the Peninsula. Province Wellesley and the Settlements of Malacca and Singapore are intersected with many roads.

Kedah has 260 miles of metalled roads. The longest, partly unmetalled, runs from Perlis through Alor Star down to Kuala Muda on the boundary of Province Wellesley. Another runs from the

Province through Kulim and Baling to Kroh in Upper Perak. In Kelantan a trunk road from Kota Baharu to Kuala Lebir and roads to Pasir Puteh and along the coastal villages are being built. In Trengganu there are as yet no roads. In Johore there are metalled roads from Muar into Malacca, and round Mount Ophir to Batu Anam on the main trunk railway and thence to Tumang, and another from Muar to Batu Pahat. From Batu Pahat roads are under construction across to Mersing and down to Johore Baharu. There is also a metalled road from the capital to Kota Tinggi and Mawai.

The first RAILWAY laid in British Malaya was eight miles long, from Taiping to Port Weld, and opened in 1885. The first section of the main line, from Batu junction to Kuala Kubu, was opened in 1892-94. Since then line has been added to line steadily from year to year. In the early days construction was nearly all carried out by the separate State Railway Departments and later by the Federal Department, which has also built 120 miles of railway for Johore, opened in 1909.

The Federated Malay States Government owns its own railways, those in the Colony and those in Kedah, Perlis and Kelantan, and it has leased the Johore railway. }

The west coast line from Johore Baharu to Prai, in length 472 miles, is complete, and from Prai proceeds through Kedah and Perlis to Padang Besar on the Siamese frontier, 580 miles from Singapore. Trains run from Singapore to Bangkok, a distance of 1,188 miles.

The east coast line branches northwards from Gemas on the Johore frontier through Negri Sembilan and Pahang and is finished as far as Padang Tungku, 267 miles from Johore Baharu. Between Padang Tungku in Pahang and Tanah Merah in Kelantan, a distance of 150 miles, construction is proceeding. Thirty-two miles of line is open for traffic between Tanah Merah and Tumpat in Kelantan, and another twelve miles on the Kelantan side of the Siamese frontier.

Branch lines connect the west coast trunk line with the ports of Malacca, Port Dickson, Port Swettenham and Port Weld.

At present traffic from the Island of Singapore to the mainland is conveyed in wagon ferries, but a causeway over the narrow straits is being built to carry two lines of rails and a roadway. At Prai, opposite Penang, deep-water wharves are to be constructed. At Port Swettenham there are large goods' sheds and wharves where ocean-going steamers can come alongside.

The line is metre gauge (3 feet 3½ inches); the track well ballasted with broken stone. There are no remarkable bridges in the country. Silt from mines and deforestation have of late years caused wash-outs and floods and necessitated a systematic raising of the line and bridges.

Large central workshops near Kuala Lumpor maintain and repair locomotives and rolling stock. Locomotives are manufactured in England and erected at the central workshops, but the goods and passenger stock is built of local timbers. On the mail trains of the west coast there are large and comfortable sleeping saloons and restaurant cars which compare to advantage with similar stock elsewhere.

Till recently the fuel for locomotives was hard wood or mangrove, but now coal from the Rawang mine is used.

The expenditure on capital account (including lines not open for traffic) was \$144,000,000 (£16,800,000) up to the end of 1920, and this has all been met from the general revenues of the Federated Malay States.

Reduced to single track the total length of line now open to traffic is 1,014 miles.

CHAPTER XXIV

THE STRAITS SETTLEMENTS

SINGAPORE.—The gate of the Far East, Singapore, stands on the sea's highway between China and Japan in the East and India and Europe in the West. At its port ships from all parts of the world discharge cargoes of merchandise for distribution to the Malayan Archipelago, and, encouraged by the freedom from duties, smaller craft bring the products of Malaysia, Indo-China, Japan, China and Siam; daily, steamers sail bearing the tin and rubber of the Peninsula to Europe and America. Were it not for the tropical heat, Singapore might have been a naval base, too, in peace as it would be bound to be in war.

The entrance to Singapore by sea from the west in the early morning past the Carimons and Pulau Bukum, and then between straits a stone's throw wide hedged with red rocks and green islands, is one of the most beautiful sights in the world. This entrance has been named Keppel Harbour after Admiral Sir Harry Keppel, though as early as 1826 it was called the New Harbour. It was this passage that was known to early Portuguese voyagers as the Straits of Singapore. In the seventeenth century it fell into such complete disuse by European vessels that its existence was forgotten, and the name Straits of Singapore was transferred, first to the Tebrau Straits separating the island from Johore, and finally to the Straits south of St. John's Island, where there is the quarantine station. The reason for the disuse of Keppel Harbour before the days of steamships was the increased size of sailing ships, which made it difficult to tow or work them with sweeps in the sheltered breezeless narrows.

Passing the jade-green waters of these Straits the wayfarer has his vision of fairyland broken by the barracks on Blakang Mati, the tall chimneys of tin-smelting works on Pulau Brani, and on the mainland the iron and zinc and granite of Tanjong Pagar docks. Nestled in a creek off Pulau Brani is still a palm-thatched village on stilts in the sea, the home of aborigines whose ancestors' dugouts

voyaged these waters centuries ago. A row of wharves, where ocean steamers draw alongside, stretches more than a mile towards the town; then come Collyer Quay, with its mercantile houses facing the roads, Raffles Square, the centre of European shops, Singapore river crowded with Chinese cargo-boats thick as ants, and across it recreation grounds leading down to Geylang, a native quarter. Inside the breakwater protecting the roads are anchored small local vessels; outside, ocean-going steamers and men-of-war. East of the breakwater by Rochor and Tanjong Ru lie the strange-looking junks that sail down from China in the north-east monsoon. The



Nakajima.

RAFFLES SQUARE, SINGAPORE.

island is flat, its highest hill, Bukit Timah, only some 500 feet. Behind Tanjong Pagar is Mount Faber with one signal station; behind the town Fort Canning with another. From the roads the most conspicuous buildings are the fine Anglican cathedral and the town hall, in front of which stands a bronze statue of Raffles, the founder of the city. On the foreshore, too, are the Singapore Club and the Post Office. Apart from these the most notable buildings are Government House, Raffles Museum and Library, and some banks, business houses and hotels. Churches and schools of all sorts, secular and denominational, are represented. There are hospitals, a lunatic asylum, a reformatory, a gaol, all the institutions

of a large modern town (population 350,355). None are old because 100 years ago the place was a mangrove swamp. Beyond the business town lie the private residences of the well-to-do of all nationalities, stretching from Tanjong Katong to Pasir Panjang and inland as far as Bukit Timah. Three miles from the shore near Tanglin Barracks are the famous colour-splashed Botanical Gardens, and in Thompson Road a reservoir set among beautiful low green hills. Electric tram and motor-buses run to every part of the town. There are motor-cars innumerable, private and for hire. Three motor drives—one round the Gap, one to Changi, one to Woodlands



THE KING'S DOCK, TANJONG PAGAR.

—will give a good idea of the island. Though Singapore lies so near the equator, in latitude $1^{\circ} 17'$ north and longitude $103^{\circ} 50'$ east, the climate is healthy if enervating. A race-course, a polo ground, cricket fields, the yachting, rowing and swimming clubs, and many football, tennis and golf clubs afford exercise for all classes.

Outside the town rubber estates have largely supplanted the pineapple and coconut plantations of earlier days. In time houses are likely to cover the whole island.

But the prosperity of the place depends on the port, with its godowns, its coaling sheds and its graving docks, one of which is the largest east of Suez. During the last five years the combined

arrivals and departures of merchant vessels have averaged over eighteen million tons, and the addition of small craft would bring the average up to twenty million.

PENANG (pop. 123,069).—The vision of Penang from shipboard is a fitting introduction to the fairylands of Malaya. A trifle smaller than the Isle of Wight, it is wooded from sandy shore to topmost peak: first a fringe of shimmering coconut fronds, then orchards and rubber estates, and above that virgin forest. The ocean steamer slows past boats and fishing-nets dragged up to dry, past bamboo fishing-stakes that straddle in the shallows, then rounds a foreland, "and in a moment there is the town and the ship seems to be running into its main street." Close to the quays lighters and fishing-boats, Chinese junks and Indian cargo-ships, and Malay craft of all kinds crowd down the southern channel. Further from shore are moored small coasting steamers from Trang, Tongkah, Kedah, Perak. In mid-channel ride ocean-going vessels. In 1920 the number of merchant vessels entered and cleared at the port was 3,852 of 6,149,835 tons, and the total number of all vessels was 22,368. Ocean-going steamers enter from the north and seldom use the southern channel.

The capital is Georgetown, though usually it is called Tanjong by Malays and Penang by Europeans. The most prominent feature on the sea-front is the tall clock-tower of the railway station, where tickets are booked for the Malay States of the mainland. Behind the railway jetty lies Beach Street, the principal business thoroughfare. A stone's throw from Victoria Pier are the Government offices, the Post Office and the Town Club; a little further back lie Police Courts, the Municipal Offices, the Town Hall, the Government Free School, St. Xavier's School, the Convent and St. George's Church. Further along the north coast road is an old cemetery where rest the remains of Francis Light, founder of the Settlement. Smooth wide roads under the green shade of tropical foliage lead the traveller past the Penang Club to the race-course, around which are clustered the Residency, a golf club and fine residential bungalows set in fair gardens. Two miles beyond the race-course the lovely waterfall garden nestles in a hollow at the foot of the hill (2,066 feet), on which are several Government and private bungalows, and the Crag Hotel under Government management. A hill railway is nearly finished, but at present its place is taken by carriers and chairs. The prospect from the hill is probably the most glorious in the Peninsula: just below, the purple and red roofs of the town on the

green promontory that stretches out into the ever-changing colours of the sea; to the north across the straits Kedah Peak towering blue-green above yellow plains of rice, and beyond in the haze of distant waters the shadowy outline of the Langkawi Islands.

The drive round the island (forty-four miles) is very beautiful, through rice-fields and orchards, up steep hills planted 100 years ago with nutmegs, past Balik Pulau, chief town of the northern district, and finally down to the sandy coast with glimpses of white boulders and a summer sea through the magic casement of coconut palms.

Four miles from the town is the famous Chinese temple at Ayer Hitam, built in terraces up the hill and crowded with gold-leaf.



PENANG.

Buddhas and bronze vessels, the gifts of the wealthy Chinese of Straits and States.

PROVINCE WELLESLEY.—This strip of territory on the mainland opposite Penang was acquired from Kedah to protect the trade of the island from the depredations of pirates who haunted the creeks across the narrow channel. The invasion of Kedah by the Siamese in 1821 led to many Malay refugees fleeing into it. Indigo and coffee were planted though with little success. The evil days that overtook Penang, as Singapore grew to prosperity, prevented for some decades much expenditure on the Province. But the Malays

opened rice-fields and Europeans planted sugar, and fishing villages sprang up. In the present century railway and rubber have given the territory fresh life. Like Malacca it is covered with prosperous Malay homesteads and rice-fields and rubber and coconut plantations. There is the northern district with its township Butterworth and some tin-smelting works. There is the central district with its township Bukit Mertajam at the junction of railway lines, leading



AYER HITAM TEMPLE, PENANG.

one across the Peninsula to Siam and the other westward to Prai, the port that is expected to bring fresh trade to Penang both from the western States and from the east coast of the Peninsula. The chief town of the southern district is Nibong Tebal.

THE DINDINGS.—In 1826 Perak ceded to the Colony "the Pulo Dinding and the islands of Pangkor," and all the other islands belonging to Perak, as an outpost against pirates. But it was not until after the Treaty of Pangkor in 1874 that the island of that

name and a strip of land opposite it on the mainland at the mouth of the Dindings was brought effectually under British rule and administered under the name of the Dindings. Malay tradition avers that on the banks of the river Dinding there was formerly an ancient kingdom, Gangga Negara, and that the Bruas river which lies further north was once the outlet of the Perak river, as certainly it was the centre of an old settlement before A.D. 1500. On Pangkor island at Telok Gedong are the remains of a Dutch fort visited by Dampier. The administrative centre to-day is Lumut in the Dindings, opposite a fine deep harbour with a narrow and dangerous entrance for modern ships: with Pangkor it is visited regularly by small coasting steamers from Penang. On Pangkor island are two villages, Telok Raja Bayang and Sungai Pinang Kechil, the latter, especially, frequented by fishermen. Rubber and coconuts are planted both on mainland and islands. Across a beautiful strait Pulau Tengah is reserved for a Government Leper Asylum. To the south lie the Pulau Sembilan.

MALACCA.—“There is a long bay with dense groves of coco-palms, backed by forests, and to the right beyond these Mount Ophir, rich in gold. . . . There are islets of emerald green lying to the south, and in front of us a town of antiquated appearance, low houses, much coloured, with flattish, red-tiled roofs, many of them built on piles, straggling for a long distance and fringed by massive-looking bungalows half buried in trees. A hill rises near the middle, crowned by a ruined cathedral, probably the oldest Christian church in the Far East, with slopes of bright green grass below, timbered near their base with palms and trees of a nearly lemon-coloured vividness of spring green, and there are glimpses of low red roofs behind the hill. On either side of the old-world-looking town and its fringe of bungalows are glimpses of steep, red roofs among the coco-palms. A long deserted jetty runs far out into the shallow sea, a few Chinese junks lie at anchor, in the distance a few Malay fishermen are watching their nets, but not a breath stirs—the sea is without a ripple, the grey clouds move not, the yellow plumes of the palms are motionless; the sea, the sky, the town look all alike asleep in a still, moist, balmy heat.” The prospect of Malacca from the sea, described by Miss Bird in her book “The Golden Chersonese” in 1879, has not greatly changed. Malacca is unique in the Peninsula for its “antiquated un-English” look and its relics of past glory: the ruined church on the Residency hill dedicated to Our Lady four hundred years ago by D’Albuquerque;

the Stadthuis, built into the foot of the same hill by the Dutch and still used as Government offices; Christ Church hard by, built by the Dutch in 1750, with some interesting silver vessels; and below D'Albuquerque's church a gateway inscribed with the date 1670, sole surviving remnant of the famous fortress. Cross the bridge over the river where Malays and Portuguese fought desperately in 1511 and one drops abruptly into the quaint streets of the business town, so narrow a motor-car can hardly thread them; Jonker Street and Heeren Street with Chinese houses two hundred years old, all different and all fitted into a colour-scheme by age. Outside the town are more antiquities. There is a fort on St. John's

*C. Ishii.*

MALACCA BY MOONLIGHT.

Hill. There is an old well on Bukit China, which five hundred years ago was the quarter of the first Chinese immigrants, but now is covered with the graves of those who lie beneath the soil they tilled. And between Bukit China and the town stand the ancient Portuguese church of St. Peter and the ruins of San Lourenço.

"No city in the world except Canton will leave so vivid an impression on me," says the traveller already quoted. And then she adds: "It is a land where it is 'always afternoon'—hot, still, dreamy. Existence stagnates. Trade pursues its operations invisibly. Commerce hovers far off on the shallow sea. The British and French mail steamers give the port a wide offing. In

the census of 1881 the resident European population consisted of thirty-two." All this has changed. To-day, Malacca town has a population of 30,671 of all races and there are 442 Europeans in the Settlement. Rubber has awakened the sleepy hollow and brought prosperity. There are business houses, a bank, clubs and large schools. Modern Chinese bungalows stretch all along the shore towards Tanjong Kling. Land is being reclaimed from the sea and covered with godowns. Japanese ocean steamers, at any rate, call at this ancient trading centre 118 miles north of its prosperous modern rival, Singapore. But Penang and Singapore, a silted harbour and the greater draught of modern vessels have robbed it of importance as a port for ever. The prosperity of the Settlement depends solely on agriculture. Everywhere rubber trees are to be seen. European and Chinese have planted up large estates. Malays cut down their fruit trees and neglected ancestral rice-fields to plant rubber. But along the roads from Malacca to Tanjong Kling and to Tampin the scenery is still typical of the beauty of Malaya, with rice-fields a vivid green, the darker foliage of orchards, palm-thatched or wooden homesteads beside sparkling streams, and away in the blue wash of the distance mountains wooded to the peak. Rubber is the principal product of the countryside, but there are exported also copra, tapioca, gambier, areca-nuts and ginger. The Malays produce rice for their own needs and Malacca is famous for the quality of its fruits.

There are two industries for which the Settlement is noted—the weaving of beautiful pandan baskets and the making of lace bearing a Portuguese name.

Besides the port there are two Government out-stations—Jasin and Alor Gajah, capital of the district of Naning.

In 1699 under the Dutch the revenue amounted to 74,950.19 florins. "Sir Stamford Raffles, in his paper on Malacca in 1807, states the total revenue derived by the Dutch to be 83,000 dollars. . . . From 1812 to 1818, according to Colonel Farquhar, it amounted, on an average, to 75,180 dollars. In 1833 it was 60,700 rupees." In 1919 it amounted to \$3,899,533 and in 1920 to \$4,567,976.

CHAPTER XXV

THE FEDERATED MALAY STATES

PERAK.—Perak consists of a wide valley, watered by the river that gives the State its name and enclosed by two ranges of mountains, the main range, which divides it from Kelantan and Pahang, rising to its greatest height in Korbu, and the Bintang range running from Upper Perak to Bruas, its highest peaks being Gunong Inas and Gunong Bubu. A beautiful forest-clad pass, traversed by road and railway, leads out of the Perak valley from Kuala Kangsar to the northern part of the State, which comprises the old mining district of Larut, Selama at the foot of the hills, the flat rice-growing district of Krian, and a narrow coastal strip, the sub-district of Matang. “Prior to the nineteenth century” this northern part “had been virtually a no-man’s land; for the Malay, who loves the banks of great streams, saw little to attract him in the desolate swamp country of the coast. Of the principal Perak territorial chiefs only one, the Panglima Bukit Gantang, had any footing in Larut at all; and he was simply a warden of the marches guarding the pass” that from time to time had been held against Siamese, Achinese and Bugis invasion of Perak proper. But the British acquisition of Province Wellesley and later the discovery of tin in Larut made the territory important, and now under British protection irrigation works have turned Krian from a swamp into 70,000 acres of fertile rice-land with two townships, Parit Buntar, where is the district officer, and Bagan Serai, which has the largest Tamil population of any village in the country.

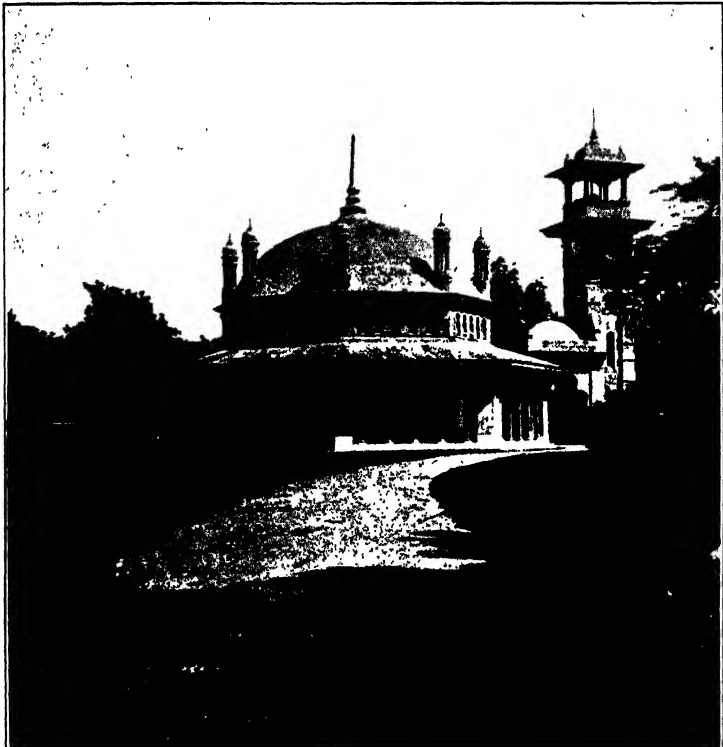
The Anglo-Siamese Treaty of 1909 restored to Perak the top of its watershed, held by Patani since 1826. This “new territory,” stretching from Kedah to Legeh and containing the tin mines of Klian Intan and the high rolling plains of Kroh, has been incorporated in the district of Upper Perak, whose capital is Grik, seventy miles north of Kuala Kangsar.

The beautiful Perak river, flowing down from the mountains past



H.H. SIR ISKANDAR SHAH, KCMG., SULTAN OF PERAK

virgin forest, over rapids, where as far down as Enggor peacocks preen themselves on the rocks, is navigable by rafts from Lambu, near Belum, by boat from Lenggong to Kuala Kangsar, by motor-boats up to Kuala Kangsar, and by coastal steamers up to Telok Anson, its port (pop. 10,859). Off the mouth of the river lie the gem-like rocky islands called Pulau Sembilan. The southern boundary of the State is the deep tidal Bernam river, which rises in the main



THE ROYAL MOSQUE, KUALA KANGSAR.

range above Tanjong Malim. There are many smaller rivers flowing down to the north of the Bintang range: the Krian, boundary stream with Kedah; the Kurau, navigable by launch up to Bagan Serai; the Sapetang, whose waters are used for the Krian irrigation works; the Larut and the Trong, which debouch into deltas of mangrove swamps, that mark the muddy coast from Krian to the Dindings and are broken up by tidal rivers, the Gula, the Selinsing, Sungai Jala, Sungai Jarum Mas.

In Malay days Telok Kertang was the Larut port and Trong the nearest landing place for those about to cross the Bukit Gantang pass. Port Weld on the Sapetang is the modern port for small coasting steamers.

Perak is divided into seven administrative districts—Upper Perak, Krian, Larut (with the sub-districts of Selama and Matang), Kuala Kangsar, Kinta, Batang Padang and Lower Perak.

The capital, dating from the pre-British Chinese mining camp, is Taiping (pop. 21,111), the most beautiful town in the Peninsula, in the district of Larut, now devoted to rubber-planting and having its old mining fields reworked by modern bucket dredgers. It is the headquarters of the regiment upkept by the rulers of the Federa-



THE MALAY COLLEGE, KUALA KANGSAR.

tion. The residency lies near a lake in the public gardens, over which tower green hills, where there is a sanatorium with several bungalows and gardens of roses and European vegetables.

The Sultan's palaces are at Kuala Kangsar on one of the fairest reaches of the Perak river, in the district that is above all the home of the real Perak Malay. There, too, are an English College for the sons of Malay princes and chiefs, and a house for the High Commissioner.

The richest district in the State is Kinta, widely famed for its tin-fields and of late years largely planted with rubber. Its official centre is Batu Gajah, but its business centre and the second town of the Federation is Ipoh (pop. 36,860), twenty years ago a ram-

shackle mining village, but now provided with Government offices, courts, churches, stone mosques, banks, clubs, a race-course, a golf-course, recreation grounds, a people's park, a rifle range and a handsome railway station. From the town are visible the blue-green mountains of the main range, and the white limestone cliffs that dot the valley. To the west is the Kledang range where there are hill bungalows. Many mining villages have sprung up in the Kinta valley—Gopeng, Sungai Raya, Lahat, Menglembu, Papan, Pusing, Siputeh, Tronoh, Tanjong Rambutan (where is the Federal Lunatic Asylum), Chemor, Ampang and Pulai—but the only one having over ten thousand inhabitants is Kampar (pop. 12,325). A new industry, that of Kaolin or China clay, has just been started in Kinta.

There is mining, too, over the Kinta boundary at Temoh, Chendriang, Tapah, Bidor and Slim in the Batang Padang district, though that district is now above all a great rubber-planting centre, as is Lower Perak, where on the coast coconuts also flourish. At the south of Batang Padang on the Selangor boundary lies the village of Tanjong Malim, where a large college for the training of Malay teachers has been built.

Tin and rubber are the principal exports, though copra, rice, betel-nut, hides, tapioca, timber, rattans, fruits and vegetables also figure in the list. The duty on tin ore in 1920 amounted nearly to one million sterling. Over 50,000 coolies are engaged in the tin industry, and machinery is used with horse-power equivalent to a labour force of just over 300,000. There are no lode mines of importance: opencast, hydraulic and dredging propositions are the most profitable. Wolfram, scheelite and tungsten ores also are mined and some gold in Batang Padang. A rough estimate gives 339,260 acres under rubber, 124,517 under rice and 95,633 under coconuts. The forests of the State are valuable, and great supplies of firewood are got from the coastal mangrove swamps. There is a considerable sea-fishing industry, employing nearly 3,000 persons.

Tradition says that in former times the mouth of the Perak river was the Dindings river, and that Bruas was the seat of an old Malay kingdom: the "Malay Annals" record how by A.D. 1500 its ruler did homage to the Sultan of Malacca in return for help against Manjong, wherever that place was. Courtiers claim that the Perak dynasty is descended from the last Sultan of Malacca. In the seventeenth century the country was overrun by the Achinese, and a Johore prince, the husband of a Perak princess and first cousin

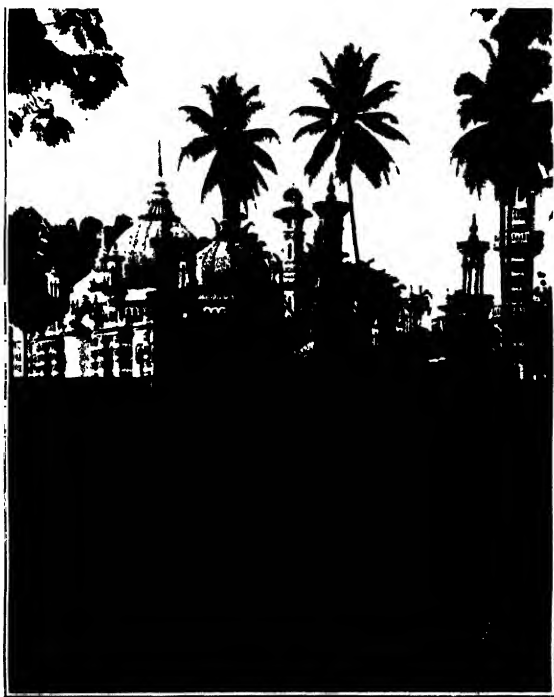
to the author of the "Malay Annals," was sent to rule it. Elsewhere have been narrated the relations between Perak and the Dutch. In 1728 the first Bugis Yamtuan Muda of Riau attacked Perak and founded Bandar on the Perak river: two of the Perak chiefs are of Bugis extraction. In A.D. 1765 Sultan Iskandar (or *Marhum Kahar*, as he was called after death) ascended the throne, and his reign, which is described in a contemporary history, the *Misa Melayu*, is regarded as Perak's golden age. About A.D. 1780 the ruler of Perak bestowed the title of Sultan on the Bugis chief who ruled Selangor. In 1819 Siam forced Kedah to attack Perak, but the Burney Treaty between Great Britain and Siam laid down that Perak was an independent State. The troubles in Larut that led to British intervention have been related already.

SELANGOR.—Selangor is bounded on the north by the Bernam, a tidal, mangrove-fringed and crocodile-haunted river, running through swampy country but navigable by launches as far up as Changkat Mantri, where on the Perak side the tomb of a pre-Malay miner has been discovered. On the south its boundary is the Sepang river. On the west its coastline follows the Straits of Malacca for 125 miles. On the east its frontier is a section of the main mountain range with several high peaks—Gunong Ulu Kali (5,820 feet), Gunong Perintis, Gunong Semangkok and Gunong Raja: two passes cross the range into Pahang—one from Kuala Kubu through Genting Semangkok (or the Gap) to Raub, one from Kuala Lumpur through Genting Simpah to Bentong. The State, which is about forty miles broad from the sea to the main range, is drained by three other rivers beside the Bernam—namely, the Selangor, which waters a low-lying district planted with rubber and coconuts, the Langat, and the Klang, whose estuaries, protected by a delta of mangrove swamps, form the finest harbour in the Federated Malay States, Port Swettenham.

For administration Selangor is divided into six districts—Kuala Lumpur, Klang, Ulu Langat, Ulu Selangor, Kuala Langat and Kuala Selangor.

The capital of the State and the headquarters of the Federal Government is Kuala Lumpur (pop. 80,424). Equipped with a water supply and electric light, the town possesses many large modern buildings, Government offices, town hall, museum, courts, a handsome railway station with a hotel and offices. There are three large hospitals, several churches for the various denomina-

tions, golf-courses, a polo ground, a rifle range, cricket and football grounds, several clubs, and many schools, Government and missionary, English and vernacular. In a valley between the town and the hill where Government Lodge and Carcosa, the residence of the Chief Secretary, are situated, are beautiful public gardens, with a small lake and many ornamental trees and shrubs. All the big Eastern banks have branch offices, and there are large European professional and business firms as well as hundreds of native shops.



THE MOSQUE, KUALA LUMPUR.

Roads radiate from it to all parts of the State. Fifty years ago it was a "Chinese mining town, with two streets and a considerable number of shops and houses, built of *adobe* and thatched with palm leaves." From it a few miles of rough unmetalled cart-track ran to neighbouring mining camps. At a table in an open shed in the market the Capitan China used to buy the heads of the rival Chinese faction, paying \$100 a head and often unable to count the trophies fast enough.

In the neighbourhood of Kuala Lumpur are a flourishing mining village, Sungai Besi, and the beautiful limestone Batu Caves, where cement is manufactured. There are small private hill bungalows at Genting Simpah on the Pahang divide.

In Ulu Selangor, a mining and rubber-planting district, the Government headquarters are Kuala Kubu, a town threatened with doom from mining silt, and there are considerable mining villages, Serendah, Rasa and Rawang. There is a Government hill bungalow at the top of Bukit Kutu (3,485 feet) and a rest-house at the Gap on the top of the pass from Kuala Kubu to Pahang. A fine hill station with a hotel is being laid out at Bukit Fraser above the Gap.

Klang (pop. 11,655) is the headquarters of a large rubber-planting district where lately tin also has been discovered in paying quantities. At Klang is the chief palace of the Sultan, a modern Saracenic building. Klang has ceased to be a port; for the port has been removed to a spot near the mouth of the river, Port Swettenham, where twenty-seven miles from Kuala Lumpur ocean-going steamers call for freights of rubber and tin and for passengers to Europe and the Far East.

The headquarters of Kuala Langat, a district planted with rubber and coconuts, is Jugra. Morib is a small seaside health resort. At Bandar the Sultan has a house.

Ulu Langat is a planting district with a few rice-fields and some tin mines. Kajang, its headquarters, is a pleasant little town with Government offices, a church, English and Malay schools and a club.

The chief industries of the State are tin mining and rubber planting. Just under 70,000 acres are alienated for mining, and just under 30,000 coolies employed for it. The amount of tin exported in 1920 was 162,392 pikuls, valued at \$24,626,737. At Rawang are the only collieries in the Peninsula. The total area of land occupied for agriculture is given at 630,946 acres, of which two-thirds are under rubber, a tenth under coconuts and the rest under rice and native holdings. Selangor has never produced much rice, and with the continued silting of rivers the planting of it must become more difficult.

In the fourteenth century Klang is said to have been subject to the Javanese empire, Majapahit. In the fifteenth century Klang was given a Penghulu of the family of the Bendaharas of Malacca, while a son of Sultan Mansur Shah of Malacca by a Chinese wife was made ruler of Jeram near Langat. When the Portuguese conquered

Malacca in 1511, "there was no need for the wayfarer from Malacca to Jugra to carry a light, for there were houses at every stopping place." After the destruction of the Malay kingdom of Malacca we hear little of the Selangor coast. During the period of Holland's influence, Dutch factories were opened at Kuala Selangor and at Kuala Linggi. In A.D. 1718 Daeng Chelak, a Bugis chief from the Celebes, who married a Johore princess, came to Kuala Selangor, and about 1780 their descendant was recognised as Sultan Salehu'd-din of Selangor by the Sultan of Perak, the throne remaining in the same family ever since. After the failure of the attack on



KUALA LINGGI.

Malacca by the Bugis Prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor and forced the ruler to acknowledge their suzerainty. In 1818 the Sultan of Selangor made a treaty of trade with the British at Penang. In 1874 Selangor came under British protection. In half a century British administration and European and Chinese capital have made a rich, flourishing, settled country out of jungle and swamp and pirate-infested estuaries.

NEGRI SEMBILAN.—The Federation of the Nine States, which was constituted in 1895, consists of Sungai Ujong, Jelebu, Johol and Rembau, and the smaller States of Ulu Muar, Jempul, Terachi,

Gunong Pasir and Inas. The main Peninsular range runs from Jelevu to Gunong Angsi and thence to Tampin, the highest peak



H. H. SIR MUHAMMAD, K.C.M.G., YANG DI-PÉRTUAN BÉSAR,
NEGRI SEMBILAN.

being Telapak Burok (3,915 feet). The frontier on Pahang also is mountainous. The rest of the State consists of undulating country,

the well-watered plains of Kuala Pilah and Rembau being covered with rice-fields right up into the foothills. Flowing down from Telápak Burok the Muar river in its upper reaches irrigates the valleys of Terachi and Ulu Muar, while its tributaries, the Jempul and the Gemenchéh, water the districts named after them, and its tributary the Jelai waters the ancient State of Jelai now known as Inas. Shallow to-day and obstructed by water-wheels and debris, the Muar is used no longer for navigation, though the early Minangkabau colonists of the Kuala Pilah district must have entered the country from its mouth on the west coast of Johore, leaving settlers on the way at the now extinct settlements of Pasir Besar and Segamat. When British protection began, Kuala Pilah still had a port and a port officer (*shahbandar*), but roads have ousted river traffic for ever. The founders of Sungai Ujong and Rembau probably ascended the Linggi river (navigable by launches up to Pengkalan Kempas) and its tributary, the Rembau. Other rivers are the Lukut and the Sepang, boundary stream between Negri Sembilan and Selangor. The Triang and the Serting fall into the Pahang river on the east coast, and following them Minangkabau colonists opened another extinct State, Ulu Pahang, which is now part of the Temerloh district of Pahang. The coast is sandy, and Port Dickson, the chief town of the coast district, opposite Pulau Arang, is a health resort, whence the first railway in the State ran to Seremban, the chief town of Sungai Ujong and capital of the Nine States, where the Resident and the head Government offices are located. The Ruler, His Highness the Yamtuan, resides between Seremban and Kuala Pilah at Sri Menanti, at the foot of the hills and the top of a beautiful valley of rice-fields, sago palms, coconuts and fruit orchards in the district of Ulu Muar. Ulu Muar, Johol, Inas, Jempul, Terachi and Gunong Pasir are now included in the administrative district of Kuala Pilah; Rembau and Gemenchéh are included in Tampin.

Seremban (pop. 17,272) is a fine town, with all the amenities that follow British rule—a golf-course, a club, a church, public recreation grounds, a hospital, a good water supply and electric light. Kuala Pilah, Tampin, Rembau, Port Dickson and Jelebu are small townships of the type characteristic of the Malay States, with several streets of Chinese, Malay and Indian shops, Government offices, a hospital, a police station, a post office, a market, quarters for officials, a recreation ground and (some of them) a club with tennis courts.

There are Government hill bungalows at Gunong Angsi (2,709 feet) above Perhentian Tinggi, and at Bukit Tangga near Jelebu.

The largest rice-fields are to be found in Kuala Pilah, Rembau and Jelebu districts, sufficient rice being produced by the Malay population for its own consumption but not for the alien coolies engaged in the rubber-planting industry. Over 10,000 acres are planted with coconuts. There are large rubber estates in Seremban and the Coast districts, in Rembau and over the southern part of the Kuala Pilah district, as well as small native estates all over the country. Of the 450,000 odd acres alienated for agriculture, about three-fifths are devoted to rubber and a fifteenth to rice.



S. Kurita.

A NEGRI SEMBILAN RIVER.

In the last century gold was mined at Batu Bersawah and Pasu, in the Kuala Pilah district, and at Chendras in Gemencheh. To-day even tin mining has greatly declined, though dredging is about to be started near Seremban; 15,610 acres are alienated for mining, but only just over 2,000 coolies are engaged in the industry throughout the State.

The Javanese poem, the "Nagarakretagama," composed in A.D. 1365, records how at that time Klang and "Sang Ujong"—that is, Sang Yang Ujong, or the modern Sungai Ujong, but then perhaps only the coast—was subject to Majapahit, a vague suzerainty it is to be imagined. The *Sĕjarah Mĕlayu* relate how Klang, one of the traditional Nine States, was given a Penghulu by the Sultan of Malacca about A.D. 1450, and how about the same period Sungai

Ujong was ruled by the Bendaharas of Malacca. Those early States must have been peopled by aborigines, and no mention is made of Rembau, Jelebu or Johol. But Portuguese accounts prove that Minangkabau immigration had begun in the sixteenth century. Couto's *Da Asia* relates how in 1586 there were Minangkabaus at Rembau, and how the incursions of their fellow-countrymen at Naning into Malacca territory nearly led to reprisals on Rembau by the Portuguese commander, Diego de Azambuga. The map in Godinho de Eredia's book, published in 1613, gives Rembau, Johol, Jempul, Serting and also Penarekan, where boats were dragged from the Jempul river to the Serting, besides a sketch of part of the Pahang river. After the conquest of Malacca by the Dutch and the Johore Malays in A.D. 1641, Johore took a leading part in Negri Sembilan politics, and its Sultan granted seals to the rulers of Rembau in 1707, Jelebu in 1760, Inas (and Naning, now part of the territory of Malacca) in 1705. The evidence seems conclusive that the original Nine States were Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning, Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between Ulu Serting and Temerloh. Wasted by Bugis attacks, Johore lost her influence in the eighteenth century, and in A.D. 1773 the four Undang or chiefs of the largest States brought over from Sumatra Raja Melewar, ancestor of the present Yamtuan, and made him their ruler with powers of arbitration rather than of government, no ownership of the soil and no power to levy taxes. Not so were differences between the States to be composed. Rembau and Jelebu appointed rival Yamtuan Mudas. The authority of the Yamtuan extended only over his immediate surroundings and Johol, which his house had supported and in effect created. But the events leading immediately to the acceptance of British protection are related elsewhere.

PAHANG.—Pahang, the east coast State of the Federation, is bigger than the other three Federated States put together. The river from which it takes its name is the largest in the Peninsula, and apart from the Pahang river the State is watered by the Kuantan, Rompin and Endau rivers, the last forming part of its southern boundary with Johore. Off the mouth of the Endau in the China Sea lie beautiful rocky islets and the larger sandy-beached island of Tioman. In the north-east monsoon it is common for wayfarers to go long journeys along the fine sandy shore of Pahang. Behind

this sandy shore are wide alluvial flats, which in the south stretch far back towards Negri Sembilan, all this tract being almost unhabited forest. Across the mouth of the Pahang, as across that of the Kelantan river, a bar of sandbanks prevents the entry of steamers. The only port steamers can enter is Kuantan and even there the bar has caused great trouble. Mountain ranges (pp. 6, 7) form the northern and western boundaries and break up a great part of the State, making agriculture less extensive than might be expected. But of late years roads and railways have conquered the inaccessibility of Pahang to planter and miner, and opened up fields that could not have been exploited profitably a few years ago, though the country still remains the least prospected State of the Federation.

Pahang is divided into the administrative districts of Kuala Lipis, Raub (and Bentong), Temerloh, Pekan and Kuantan. The present capital is Kuala Lipis, whence a metalled road runs through Raub past glorious scenery over the Gap down to Kuala Kubu in Selangor. A fine hill-station has been started on Bukit Fraser (3,990 feet) near the Gap. The Sultan lives at Pekan, a few decades ago the capital, six miles from the mouth of the Pahang river. Temerloh, a rubber-planting centre, also lies on the Pahang river, a few miles from the railway. Kuantan, the most important town in the State, a centre both for planting and mining, lies north across the river, accessible by steamer from Singapore or by a long motor journey from Benta on the Kuala Lipis road. The principal mining centres are Raub, where is a well-known gold mine; Bentong, where tin dredging is done; Tras, where there is alluvial mining for tin; and Sungai Lembing, near Kuantan, where the lode workings are among the world's greatest tin mines. The total area of land alienated in the State for mining is about 33,750 acres.

The rice grown in Pahang is not enough to meet the State's requirements. Copra and tapioca are exported. There is a large export trade of dried fish.

The early history of Pahang is obscure. At Selinsing and at Raub there are large old mining works called by Malays "Siamese" shafts, but probably the relic of Mon miners, who vanished after the ascendancy of the Thai or modern Siamese in the valley of the Menam. Chao Ju Kua, writing about A.D. 1225, mentions Pahang along with Trengganu and Kelantan as being subject to the old Buddhist Sumatran kingdom of Sri Vijaya. Later it and the island of Tioman are claimed as conquests of the Javanese empire

of Majapahit. Chinese records of the fifteenth century say of the people of Pahang: "They make human images of fragrant wood and kill people to make a sacrifice of the blood, when they pray for luck. Men and women have their hair in a knot and are clad in a single piece of cloth. Girls of rich families wear four or five gold circles on their foreheads, and the daughters of the common people use strings of coloured beads instead. They boil salt out of seawater and make wine by fermenting rice-gruel. Products of the



A ROYAL GRAVE, PEKAN, PAHANG.

country are aloes, tin, and a kind of wood used in dyeing." The "Malay Annals" speak of some town near the then estuary of the Pahang river, whose place must have been taken by the modern Pekan, under the honorific Indian name "Pura," and talk of the gold-dust, the elephants, wild oxen and deer of the country. They relate how in the fifteenth century Sultan Mansur Shah of Malacca led its ruler into captivity and married his daughter. This princely family did not speak Malay, and the Malay of the Pahang folk is

described in the story of Hang Tuah as being at this period a "mixed" language. Modern Muhammadan Pahang starts with rulers of the royal house of Malacca. In 1618 the redoubtable Mahkota Alam made a raid on Pahang, and carried off one of its rulers who became the father of a Sultan of Acheen. Before the old Malacca family died out altogether in 1699, the Pahang branch of it provided also several rulers for the senior throne of Johore. Later Pahang fell under the suzerainty of the new Sultans of Johore, who, removing to Lingga, left a Bendahara in charge of Pahang and a Temenggong in charge of Johore. From those two dignitaries the modern sultanates of Johore and Pahang are derived. In 1888 Pahang sought British protection.

CHAPTER XXVI

THE UNFEDERATED MALAY STATES

JOHORE.—The State of Johore lies at the southern end of the Peninsula, its west coast washed by the Malacca Straits and its east coast by the China Sea. On the south the mainland is separated from the island of Singapore by the Straits of Tebrau. The country, still largely covered with jungle, is less mountainous than any State in the Peninsula. The highest hill is Gunong Ledang, or Mount Ophir (4,186 feet), situated near the boundary of Malacca; but the most important group is the Blumut Hills. The largest river is the Muar, the backbone of a State of that name, which was united with Johore in 1877: rising in Negri Sembilan, it flows in Johore through the Segamat and Muar districts to its mouth in the Straits of Malacca, where the town of Bandar Maharani is situated. In the north the river Endau, navigable up to Kuala Sembrong, forms the boundary up to that place with Pahang, and in the south the Johore flows into the Tebrau Straits, as also do the smaller Sekudai and Pulau rivers. Various small islands belong to the State: on the east coast, Pulau Tinggi, Pulau Babi, Pulau Sibul, Pulau Pemanggil, Pulau Aur and many tiny islets; on the west, Pulau Kukub and Pulau Pisang.

The capital is Johore Baharu (pop. 15,312), situated on the Tebrau Straits opposite the island of Singapore. Here are the Sultan's palace, a large mosque, the Government offices and the residence of the General Adviser. It is the starting place on the mainland of the railway from Singapore to Bangkok. The next important towns are Bandar Maharani (pop. 13,327), the capital of the well-cultivated Muar district, and Bandar Penggaram in another agricultural district, Batu Pahat. Other towns are Kota Tinggi up the Johore river, a seat of royalty in the seventeenth century, Mersing, centre of a mining district on the east coast, and on the railway line Batu Enam and Kluang.

The total population of the State is 282,234, nearly half that number being Malays. Only between 1914 and 1915 was the birth-

rate higher than the death-rate, but owing to the immigration of coolies and small Javanese, Sumatran, Banjarese and Bugis land-holders following the development of the State for rubber, the actual



H.H. SIR IBRAHIM, G.C.M.G., K.B.E., SULTAN OF JOHORE.

rate of increase since 1911 is the highest in the Peninsula. It has been only during the last decade that planters of rubber, no longer able to get conveniently situated land in the Federated States, have

turned to Kedah and Johore. The development of planting and mining has led to an abnormal increase in the number of Chinese and Indian immigrants into Johore.

The area of land under mining titles is nearly 20,000 acres. In 1915 the discovery of rich tin deposits at Jemaluang led to the opening of the township Mersing and the development of the Endau district. Lately Japanese have opened an iron mine, the ore of which is said to be mainly hæmatite and to contain 65 per cent. of iron.

The principal products of the State are rubber, tin, gambier, copra, tapioca and areca-nuts. The principal other sources of revenue are the duties on spirits and tobacco and the Government monopolies. The chief imports are rice, tobacco, kerosene, spirits, miscellaneous food-stuffs, timber and iron goods. The revenue rose from \$3,954,901 in 1911 to \$11,838,975 in 1920.

Small coastal steamers visit Muar, Batu Pahat, Benut, Pontian, Kukub, Kuala Pulai, Kota Tinggi and Mersing.

The earliest history of Johore is a matter of surmise (p. 128). In historical times it was known from its position as Land's End (*Ujong Tanah*). The Javanese poem, the "*Nagarakretagama*," mentions it as subject to Majapahit, and a Malay history of Pasai, the early Muslim settlement in Acheen, records that not only Ujong Tanah but Pulau Tinggi and Pulau Pemanggil (as well as Tioman) were subject to that Javanese empire. But the name of Johore dates from about the time when the last Sultan of Malacca, beaten by the Portuguese, fled south and the Malacca royalty finally made its home up the Johore river. Frequently the Portuguese attacked and destroyed the early Malay settlements. The relations of Johore with the Dutch and Achinese have been set forth elsewhere (p. 137). The conquest of Malacca by the Dutch took away all trade from Johore. In 1699 the last representative of the princes of Malacca died, and the line passed to their relatives the Bendaharas. In the eighteenth century the Bugis harried the country, until ousted from Riau in A.D. 1784 by the Dutch. The Ruler of Johore removed first to Riau and then to Lingga, leaving as his representatives a Temenggong of Johore and a Bendahara of Pahang. As already related, it was from the Sultan and Temenggong of Johore that the British acquired Singapore. In 1868 the title of Temenggong was changed for Sri Maharaja and in 1885 for Sultan. The State is governed by three Councils under the presidency of His Highness the Sultan.

KEDAH.—Kedah (3,648 square miles, including the Langkawi islands) is bounded on the north by Perlis and the Siamese province Singgora, on the south by the Krian river which divides it from Perak, on the east by Patani, and on the west by the Straits of Malacca. All but two are natural frontiers of watershed, river and sea. The boundaries dividing Kedah from Perlis and from Province Wellesley are political and artificial, the former determined after the Siamese conquest of 1821, the latter arising from the British purchase of a strip of mainland opposite Penang in 1800. The Langkawi islands, and (opposite Kedah Peak) Pulau Bunting, Pulau Songsong, Pulau Bidan and Pulau Telor belong to the State of Kedah.

The coastal area is a flat low plain, and from the Perlis boundary down to Kedah Peak is one long stretch of rice-fields, forty miles long and twelve wide. In the south there is higher land, planted with rubber, coconuts and tapioca. Low mountains, none of them 3,000 feet high, run from Alor Star across the Peninsula to Singgora, the sea to the north-west of this range forming a barrier range for flora and fauna when the Peninsula was still a group of islands. In the plain are the famous Kedah Peak (or Gunong Jerai), one of the sights of Penang twenty-four miles away, Bukit Perak, to which native tradition married the Peak, and the small but precipitous Gunong Griang, or Elephant Hill, rising abruptly out of green rice-fields. In the Langkawi Islands there is Gunong Raya (2,950 feet).

The country round Alor Star, the capital, is watered by the Kedah river, whose two main branches meet at that place, the Pendang flowing from the east and south, and its other stream flowing from the north under various names—the Anak Bukit, the Padang Trap, the Nerang and Pedu. The Kedah river is navigable for small steamers and lighters from its mouth up to Alor Star, but in the smaller neap tides steamers cannot always cross the bar that lies outside its estuary even at high water. The Merbok river, now little more than a wide estuary, is navigable up to Sungai Patani, headquarters of the Kuala Muda district, and to Semeling: it is connected with the Kuala Muda river by the Sungai Trus which is partly artificial. The Kuala Muda river, or “river with a new mouth,” possibly flowed once into the Merbok. Not navigable by steamers, it has two main branches joining at Kuala Ketil, the Sungai Kuala Muda running down from the northern boundary and the Sungai Ketil from the mountains above Baling. A network of 155 miles of canals for a depth of 10 miles down the coast is almost

more important to agriculture than the natural features: the Wan Mat Saman Canal from Alor Star to Gurun is the chief.

The capital, Alor Star (pop. 11,596), where the Sultan and Adviser live, lies seven miles up-river and some sixty miles by sea from Penang: it is the centre of government and of the great rice-planting industry. The centre of the rubber and tapioca trades is Sungai Patani. At Kota Kuala Muda there are timber and rice mills. Small coasting steamers ply daily between Penang and Alor Star, Sungai Patani, Yen, Sungai Limau, Salak, Semeling, as well as to the Langkawi islands. There is an excellent telephone system throughout the State.

There are tin mines at Semeling in the district of Kuala Muda, at Sintok in the district of Kubang Pasu and at Baling, and lode mining has begun at Bukit Ibu. The wolfram mines at Sintok were the largest in the world when the demand for that metal was high.

The population was 338,558 at the census in 1921, almost two-fifths of which was in the rice-growing district of Alor Star. The increase among Kedah-born Malays was evidence of the prosperity in the last decade. There were just under 60,000 Chinese engaged in rubber planting and trade.

The principal exports are rubber, rice, tapioca and sago, tin ore, poultry, forest produce, fish, cattle.

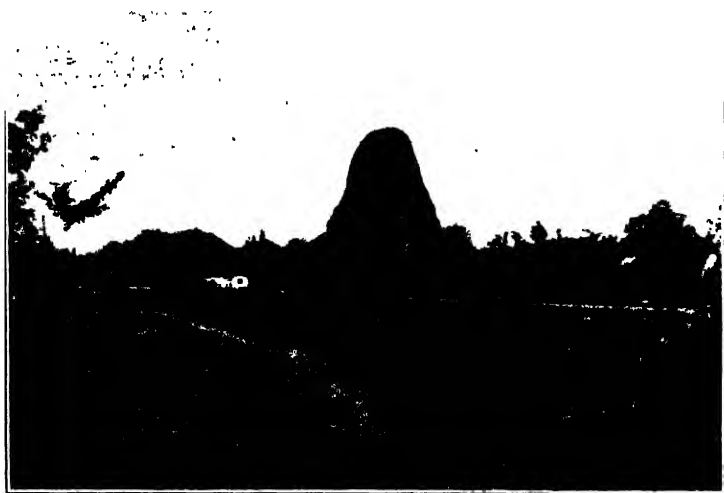
The early history of this ancient Malay kingdom is given elsewhere (pp. 126-8). An old name for the land was Langkasuka, a word surviving now only in the name of a small tributary to the upper reaches of the Perak river. The "Kedah Annals" relate how the third ruler removed from its site near Kedah Peak because it was too far from the sea. An Achinese account gives 1474 as the date of the conversion of the first ruler of Kedah to embrace Islam. The "Malay Annals" record how another ruler visited old Malacca to ask for regalia from Sultan Mahmud, who was driven out by the Portuguese in A.D. 1511. In 1516 Barbosa described Kedah as "a place of the Kingdom of Siam": to the port "an infinite number of ships resort, trading in all kinds of merchandise. Here come many Moorish ships from all quarters. Here, too, is grown much pepper, very good and fine, which is conveyed to Malacca and thence to China." In 1611, according to Da Faria, Diogo da Medoca Furtado, sailing down from Tenasserim to Malacca, destroyed the towns of Kedah and Perlis with fire and sword. In 1619 Sultan Iskandar Muda, or Mahkota Alam of Acheen, led the

rulers of Kedah and Perak into captivity, and Achinese influence lasted for some years. Dutch relations with Kedah have been sketched already (p. 137). Thomas Bowrey says there *was* a British factory in the country from 1669 to 1675 but it was a failure. In 1770 the Bugis burnt the town. In spite of having done nothing to ward off the aggression of Portuguese, Achinese, Dutch and Bugis, Siam still claimed suzerainty over Kedah. In 1821 she invaded the country and ruled it for twenty-three years, dividing it into four divisions—Kedah, Setul, Perlis and Kubang Pasu. In 1826 the British recognised Kedah as tributary to her conqueror, because it was desired to prevent the Siamese from co-operating with the Burmese during the first Burmese War. In 1843 Kedah, the division, was restored to a Malay Sultan under Siamese protection. Later Kubang Rusa, also, was restored, but Perlis remains independent and Setul part of Siamese territory. In 1909 suzerainty over Kedah and Perlis was transferred by Siam to Great Britain. To-day, though the official language is Malay, there is a sprinkling of Europeans in the Government service, superintending lands and surveys, courts and police and public works. The government is carried out by a State Council of five, of which the Regent is President and the Adviser the only British member, the remainder being Malays.

PERLIS.—Down to 1821 Perlis was subject to Kedah, of which geographically it is a part, but the Siamese conquered Kedah in that year, and when in 1841 they restored its Sultan they made Perlis an independent State, under a Raja of a Sayid house. It comprises the watershed and basin of the Perlis river. In the south-west it is a rich alluvial plain covered with rice-fields; in the interior it is hilly, the highest peaks being Gunong China (2,374 feet) and Gunong Jerneh (1,070 feet). The Perlis river is navigable for small coasting steamers up to Tebing Tinggi, whence three miles of metalled road run to Kangar, the capital and residence of the British Adviser. The residence of the Raja is at Arau, which being on the railway line is bound to grow in size and importance. The Peninsular railway traverses Perlis from south to north, where at Padang Besar it connects with the Siamese line to Bangkok. The State is joined by metalled roads with the Kedah system. Steamers ply twice a week between Perlis and Penang. There is a good system of telegraphs and telephones. The revenue has increased 400 per cent. in twelve years. The chief articles of export are tin ore, rice, fish, poultry and eggs. Tin ore, when found, is in a very pure form in

limestone caves worn out by the action of underground streams, so that the finder may make a fortune in a few weeks. There is guano in the limestone caves, which at present is unworked. A fair amount of guano in its raw state is used to manure the rice-fields, usually once in three years. The fishing industry is considerable, and fishing in rivers, streams, and even drains, perhaps the greatest occupation in the State.

Perlis had incurred a debt of nearly half a million dollars to Siam, which was taken over by the British Government when suzerainty was transferred to Great Britain under the Treaty of 1909. The



GUNONG JERNEH, PERLIS.

Raja is President of the State Council, of which there are four other members, one of them being the British Adviser.

KELANTAN.—The Protected State of Kelantan is about the size of Johore, or of Selangor and Negri Sembilan together. It consists of the basin of the river from which, following the custom of most Malay States, it derives its name and of the valleys of the Golok river, which rises over the Patani border on the west, and the Semarak river, which rises in the Bukit Yong range on the east. Behind the sandy beach the land is flat, watered by many tidal inlets, and planted with coconuts or beautiful with casuarina trees. For ten to twenty-five miles inland stretches a wide plain, mostly cultivated.

In the south isolated hills dot the open country and lead towards the jungle-covered chains of the frontier mountains. Of these mountains Gunong Tahan is the highest in the Peninsula, but there are many tall mountains to the west and south-west, Gunong Belimbing, Gunong Setong, Gunong Kamiri and Gunong Noring being the loftiest. From its source in the bosom of forest-clad hills, flowing over cataracts and rapids and then past high banks, planted, like the banks of all Malay rivers, with coconuts, betel-palms and feathery bamboos, the Kelantan river is 120 miles long when it falls into the China Sea. Like the Pahang river it bears several names—Betis at its source near the Perak boundary, then Nenggiri, then



Nakajima.

MALAY MARKET, KELANTAN.

Galas and finally Kelantan; 400 yards broad at Kota Baharu, 8 miles from its mouth, it is navigable by small launches up to Kuala Lebir and by motor-boats as far as Kuala Pergau. But across the mouths of its delta lies a bar of sandbanks, heaped by the monsoon-driven waves of the China Sea, which, except when pierced by great floods, prevents the entry of any vessel of more than 9 feet draught.

The population of the country at the 1921 census was 309,300, more than nine-tenths of the people being not only Malays but Kelantan-born. Though the waves of immigration from India, China and the islands of the Archipelago have left Kelantan almost

untouched, yet the districts of Kota Baharu (186,595) and Pasir Puteh (66,898) are more densely populated than any country district in the Federated Malay States, and Kelantan contains the largest Malay population of any State in British Malaya. The Siamese, living chiefly in the coast districts, follow their own Buddhist religion. The Chinese consist of Hokkiens and Hailams. India is represented by a few Punjabis and Afghans, Muslim Tamils and Tamil coolies employed on estates and on the railway.

The administrative districts of Kelantan are Kota Baharu, Ulu Kelantan and Pasir Puteh. The capital, Kota Baharu (pop. 10,833), is the home of the Sultan and the seat of the protecting Government; its port is Tumpat at the mouth of the delta. Bachok, Kemasin and Semerak are coastal fishing villages. In Ulu Kelantan, Kuala Krai is the headquarters of the District Officer and Kuala Lebir the planting centre. Other villages are Pasir Mas, Tanah Merah and Pasir Puteh.

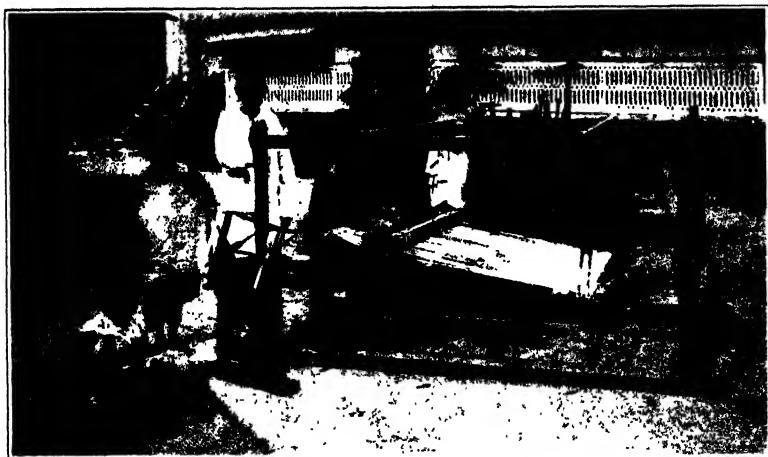
There are a number of rubber estates up-country, and down-stream are coconut plantations and rice-fields, which supply grain for the whole population.

Gold mining was carried on for years at Pulai by Chinese but has now ceased, and European enterprise resulted in loss, though in 1906 ore to the value of some £25,000 was exported. There is tin and galena, but lack of communications has made prospecting difficult and working unprofitable.

The chief exports are rubber, copra, cattle, poultry, betel-nuts, dried fish and silk cloths, Kelantan women being notable weavers. It is considered unlikely that the export of cattle and poultry will be possible in the future. Imports are tobacco, spirits, kerosene oil, sugar, salt, gambier, iron and cotton goods and miscellaneous provisions.

Details for Kelantan history are scanty. Chao Ju Kua, writing about A.D. 1225, stated that at that time the State, like Kedah, Trengganu and Pahang, was subject to the great Sumatran Buddhist kingdom, Palembang. A Javanese poem, the "Nagarakretagama," composed in A.D. 1365, relates that it was then subject to Majapahit. Chinese chronicles of the fifteenth century speak of Kelantan as ruled by a Maharaja. The "Malay Annals" tell how the last Sultan of Malacca invaded and conquered the country, carrying off princesses bearing non-Malayan titles. The capital is to be found on Portuguese and Dutch maps. There are interesting Kelantan laws, dated A.D. 1650, containing regulations for river tolls and

port dues that closely resemble those of the *Tarikh-i Tahiri* and suggest strong Muslim Indian influence. The Kelantan gold coin (*dinar*), unfortunately undated, corroborates this influence, seeing that it often has on it an animal such as is found only on Indian coins. After falling under the sway of Patani and of Trengganu, Kelantan revived towards the end of the eighteenth century under the suzerainty of Siam. In 1903 Siam appointed a British Adviser to the Sultan's Court, and by the Treaty of 1909 transferred her suzerainty to Great Britain. By a subsequent treaty the Raja of Kelantan agreed to accept a British Adviser, whose counsel he would follow in all matters other than religion and custom, and not to



Nakajima.

A KELANTAN LOOM.

alienate land to other than natives of Kelantan without that Adviser's consent. The State Council is composed of the Ruler, ten Malay chiefs and the Adviser and Assistant Adviser. By the British the Ruler has been raised to the dignity of a Sultanate.

TRENGGANU.—The State of Trengganu is bounded by Kelantan on the north and north-west, by Pahang on the south and south-west, and by the China Sea on the east. Its inland boundaries follow the watersheds of its biggest rivers—the Besut, Trengganu, Dungun and Kemaman. The northern boundary with Kelantan was settled by a Commission in 1912 but the southern is still undefined. The Perhentian, Redang, Kapas and Penunggul islands belong to the State. It differs from other States on the east

coast by being long and narrow with an extensive coastline, and by having no less than thirteen river basins. The coast is cut by a number of gullies formed by flood-water breaking out to sea in the north-east monsoon: during the monsoon many are deep and impassable, but for the rest of the year they are dry or shallow. Where the water has found no outlet, lagoons have been formed along the coast, notably at Kretai, Merchang and Setiu.

The most important division of the State is the plain below the Kelemang falls. These falls, lying about thirty miles from the coast at the foot of the mountains of the interior, consist of eight boulder-strewn rapids that make even the transport of jungle produce from upstream impossible. The country above the falls is little known to Malays, though it was traversed by Sir Hugh Clifford in 1895 when he led an armed expedition from the Upper Spia in Pahang. Cabined by the barrier of the falls into the plain below, the Malay of Trengganu displays, as agriculturist, fisherman and craftsman, an energy uncommon elsewhere in people of his race.

As yet there are no trunk roads, railways or telegraphs. Communications within the State are by river or native path, and with neighbouring States by sea, though there are cattle-tracks leading from Dungun and Kemaman into Pahang and from Besut into Kelantan.

The total population of Trengganu in 1921 was 153,765, of whom 149,553 were Malays. The decrease in population in the last decade is ascribed to epidemics of cholera, smallpox and influenza, and to emigration to Lower Siam during a scarcity of rice.

The capital and main port is Kuala Trengganu (pop. 12,453) at the mouth of the river after which the State is named. The river has a bar with seven feet of water over it at low water, and during the north-east monsoon there is excellent and safe anchorage at Pulau Kapas, seven miles south. The houses of the capital, constructed largely of bamboo, are built close together; sanitation is defective and there is considerable risk of fire. Ships also enter the Kemaman, anchoring off Chukai, a growing town two miles upstream. Kuala Besut is the only other settlement of any size.

The main exports are tin and wolfram ore, dried fish, pepper and copra; and there is a large output of betel-nut, fish-paste, Malay iron and brass work and mats. The State produces too little rice for its needs, and about 150,000 *pikul* are imported annually, much of it brought from Siam in junks and native craft. Other imports are sugar, petroleum, cotton stuffs and tobacco.

A tin lode has been worked for a quarter of a century at Bundi in Kemaman; other tin mines are at Sungai Ayam and Kajang, also in Kemaman. Tin is worked also in the Paka and Besut rivers. Wolfram is mined at Chenderong in Kemaman and at Dungun, and has been found at Merang. Graphitic shale, magnetite, scheelite and lignite have been found. So far owing to lack of communications little of the interior has been explored.

The early history of Trengganu, as of so many Malay States, is obscure. The Chinese Buddhist monk and traveller, Chao Ju Kua, mentions it among places subject to the old kingdom of Palembang. The "*Nagarakretagama*" speaks both of Trengganu and of Dungun as tributary to Majapahit. The "*Hikayat Hang Tuah*," a seventeenth-century Malay romance of a famous Malacca warrior, tells how Hang Jebat and Hang Kasturi slew a Trengganu prince, Megat Panji Alam, on the steps of the palace of the Ruler of Pahang, when the prince pursued Hang Tuah for carrying off his betrothed, Tun Teja, daughter of the Pahang prince. Megat is still the title of an old Trengganu family, and there is a tradition it was once of royal status. The present royal house, like those of Pahang and Johore, is descended from Bendahara Abdul-Hamid, the father of the non-royal Bendahara Abdul-Jalil, who became Sultan Abdul-Jalil Shah of Johore in 1701, after the last scion of the royal house of old Malacca was stabbed at Kota Tinggi in Johore in 1699. In 1720 the Bugis sacked the port. The Ruler sent triennial tribute to Siam as his overlord until 1909, when Siam transferred the suzerainty to Great Britain. In 1910 a treaty was signed by which the Sultan accepted an Agent, and a later treaty made the British representative an Adviser. The State is now governed by a Council, consisting of the Adviser and twenty Malay members.

CHAPTER XXVII

MALAYA'S CELEBRITIES

THE earliest great names connected with the Peninsula are those of the first European conquerors of a Malay kingdom. In 1506 AFFONSO D'ALBUQUERQUE sailed from Portugal with secret instructions that after three years he was to be Viceroy of India. On the voyage he visited the Red Sea and the Persian Gulf, captured Ormuz and erected a fort there. For a long time his predecessor, Don Francisco D'Almeida, refused to hand over the Viceroyalty, probably because he disagreed with the policy of conquering foreign territories and was content to rely on a fleet. In 1510 D'Albuquerque captured, lost and recaptured Goa, and made it the headquarters of Portugal in India. Next year he conquered Malacca and spent six months organising the port. On the voyage back to Goa, like Raffles, he lost all his Malay collections, including the lions he had taken from the tombs of Malacca Sultans to adorn his own grave. With difficulty he was saved from the wreck. Then once more he conquered Ormuz. On the way to attack Aden he was taken ill, and died in 1515 on his ship in the harbour of Goa. He was a brave soldier, daring a continent with a handful of troops. Also he was an able and disinterested administrator. He was religious, and the fanaticism of that time may account for his ruthless cruelty to "infidels." He believed in a land empire for Portugal, and was the first to encourage the marriage of his soldiers with native women. He is to be reckoned as one of the world's great empire builders. In Malacca, too, there served as a soldier the famous Portuguese poet, CAMOENS, the author of the "Lusiad," who after living for sixteen years in India returned to Lisbon in 1569 as poor as when he left. But the greatest name after D'Albuquerque associated with the port is that of the soldier of Catholicism in the East, S. FRANCIS XAVIER, who landed there in September, 1545, people running to receive him and shouting, "The Holy Father is here." He stayed till the end of the year, preaching on Sundays and Feast days at the cathedral, confessing

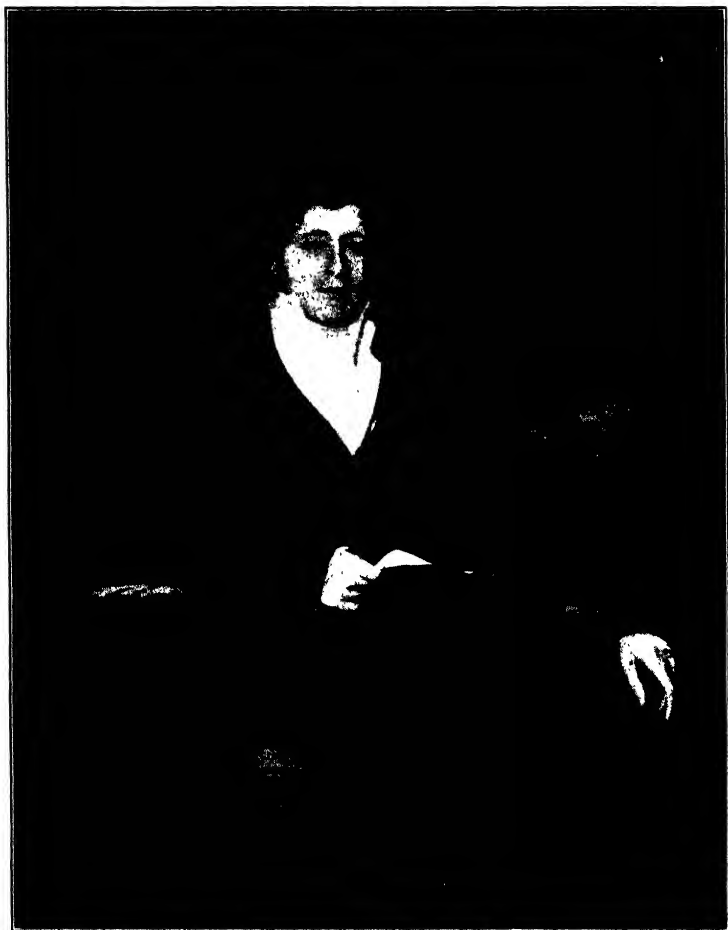
and communicating the sick, at night going through the city with a bell, commending the souls in purgatory, and taking with him a number of children to whom he was teaching the Christian doctrine. He made himself "a soldier to the soldiers and a merchant to the merchants." When some soldiers put away cards at his approach, he bade them play on, saying that soldiers need not behave like monks. He translated with great difficulty into Malay the Creed, the General Confession, *Paternoster*, *Ave Maria*, *Salve Regina* and the Commandments. On the 1st January, 1546, he left for the Moluccas, returning to Malacca in July, 1547, and staying till the end of the year. During this visit he slept frequently in the sacristy, and often was seen to enter the empty church at night. In 1549 he returned again to Malacca for a month on his way to Japan. His last visit was in May, 1552, on his voyage to convert China, when Alvaro d'Ataide, Captain of the Fort and Captain-General of the Sea, forbade Xavier's friend, Diego Pereira, to sail as ambassador of Portugal to the Emperor of China, though he had been officially appointed and had spent large sums on the merchandise and presents which the Saint hoped would help to introduce Christianity. Xavier threatened excommunication, spent long nights in the Church of Our Lady and in the early morning said masses for Don Alvaro. All in vain. About 15th July, accompanied by a Portuguese Brother, a Chinese youth called Antonio who had been trained at the College at Goa, and Christopher, a Malabar coolie, St. Xavier left Malacca without his ambassador. "He stood still and prayed for his persecutor, but sobs choked his voice and so he knelt down in silence. When he rose, he took off his shoes and shook the dust from them. Then without another word he boarded his ship." From Singapore he wrote several letters and sailed on. He died at Sanchian on the 25th November. His body was brought back to Malacca and buried in the first Catholic cathedral of the Far East, whence after a few years it was translated to Goa.

In 1641 Malacca was captured by the Dutch. Among its Commanders was JAN VAN RIEBEECK, who, when he was appointed in 1662, had already founded the then insignificant Cape Town. Thither the slab on his wife's grave was removed recently from the church on the hill at Malacca. One of the most distinguished sons of Malaya was HERMANUS NEUBRONNER VAN DER TUUK (1825-1894), the founder of Malayan comparative philology. He was born at Malacca, his father being a high Dutch official and his mother Louise Neubronner. He was educated in Holland, but visited

London and catalogued the Malay manuscripts in the East India House and the library of the Royal Asiatic Society. He wrote on the Batak, Toba and Lampong languages, published "Outlines of a Grammar of the Malagasy Language," and spent the last twenty years of his life compiling a great Kawi-Balinese-Dutch dictionary. He died in the hospital at Surabaya.

The first Englishman to visit the Malay Peninsula was a London merchant, RALPH FITCH, who sailed from Pegu to Malacca in 1588 and stayed there a month. In 1591 JAMES LANCASTER reached Penang, and buried twenty-six of his crew and a merchant there at a spot unknown. But heading the roll of British empire builders in the Peninsula is FRANCIS LIGHT (*vide* p. 141), who hoisted the Union Jack at Penang in 1786, on the eve of the birthday of "the first gentleman in Europe," after whom the new settlement was called Prince of Wales' Island, while its capital was named Georgetown in honour of George III. Light died in Penang of malaria in 1794. His elder son was on Wellington's staff at Waterloo and laid out Adelaide. A minor worthy, Mr. John Dickens, the first magistrate at Penang, deserves mention because he was an uncle of the novelist, and because he called notice to "the inattention of Mr. Raffles to what the Governor and Council must have expected of him when they made him Licenser of the Press": the future empire builder had omitted to erase an underlining! However, as at least one European litigant demanded satisfaction from Mr. Dickens on his morning ride for an adverse judicial decision, possibly his temper was tried. STAMFORD RAFFLES (1781-1826), born off Jamaica on his father's ship and afterwards a clerk along with Charles Lamb at the India House, escaped "the dry drudgery of the desk's dead wood," and arrived in Penang in 1805 on a salary of £1,500 a year as a secretary in the service of the East India Company. From the start he was distinguished for his interest in the Malay language; most Europeans fail to grasp its grammar after a lifetime among the people, but Raffles mastered it from some antediluvian book on the long voyage to the East. Very soon he was made translator and interpreter to the Government, though Abdullah's transcript of his colloquial Malay a few years later makes one curious to read his letters to Rajas. Anyhow his scholarly enthusiasm won the friendship of John Leyden, who came on a visit to Penang, in those days reputed a health resort, and returning to Calcutta recommended his host to the notice of Lord Minto. In 1808, when illness forced Raffles to take a short holiday (abbreviated by the Governor's

urgent need of his only dispatch-writer), he went to Malacca, and his letter to Lord Minto on what he had seen saved the one historic settlement in the Peninsula and kept it to form part of the later Crown Colony. In 1810 Raffles proceeded to Calcutta in a one-



SIR STAMFORD RAFFLES.

cabined sailing vessel, which a drunken pilot nearly wrecked on the Hooghly bar, to moot the conquest of Java. The Governor-General turned upon him "a look of scrutiny, anticipation and kindness" and in the next year Raffles guided the expedition for the conquest of that island. As Lieutenant-Governor of Java

he abolished slavery and torture, and instituted trial by jury and an equitable land system. When Java was restored to the Dutch, Raffles was posted as Lieutenant-Governor to the dead station of Bencoolen, but he approached Lord Hastings, the new Governor-General, and got permission to seek a trading station, south of Malacca, on the main trade route to the further East. Colonel Bannerman, the Lieutenant-Governor of Penang, was jealous alike of a rival settlement and of Raffles, and put every obstacle in his way. But, accompanied by Major William Farquhar, late Resident of Malacca, Raffles sailed away secretly, inspected and condemned the Carimons, and then dropped anchor off St. John's Island in Singapore Harbour. Farquhar was sent to fetch the raja whom it suited Raffles to recognise as the *de jure* Sultan of Lingga and Johore. On the 6th February, 1819, the Temenggong of Johore and the newly created Sultan signed a Treaty authorising the British to establish a trading station. From 1819 to 1823 Colonel William Farquhar was Resident of Singapore, and Raffles paid only three visits to the place and stayed there in all just over a year. But being "an instrument set to perfection," he framed the policy for the station and made it a free port. He abolished slavery and cock-fighting. He instituted the land system and drew up a remarkable code of laws and regulations for the preservation of peace and order, and as in Java introduced trial by jury. He founded Raffles' Institution. By the foresight and efforts of Raffles alone Singapore, now the seventh port in the world, was chosen and kept for the British Empire, despite the hostility of the Dutch, the jealousy of Penang, the apathy of the Calcutta Government and the timorousness of India House. Raffles had lost his first wife and all his children but one from tropical fevers. In 1824 he set out for England on board the *Fame*, but the ship was burnt and Raffles lost his manuscripts, his zoological and botanical collections, and a Noah's Ark of wild animals and birds, the whole being valued at £30,000. He did his best to replace the collections, and two months later, on the 10th of April, sailed for home, reaching Plymouth on the 22nd of August. He thought of a Parliamentary career and became founder and first President of the "Zoo," where his bust stands in the lion-house. But years of hardship in tropical countries, which then lacked all amenities, had made him at forty-five "a little old man, all yellow and blanched." Farquhar attacked his claim to have founded Singapore, and he had to answer for his parentage of that "political child." The East India Company, from which he expected a pen-

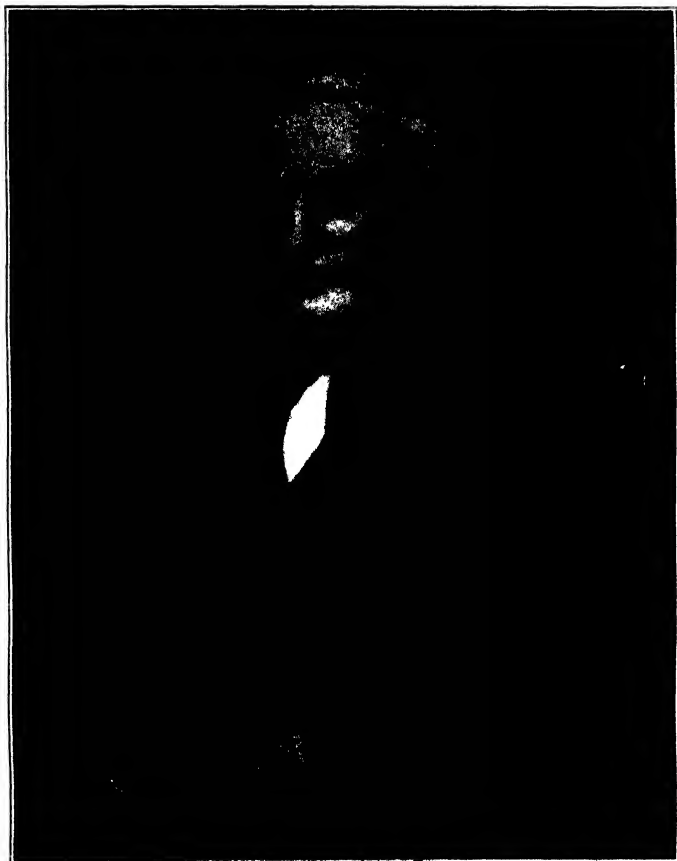
sion, suddenly claimed over £20,000 from him for accounts very debatable, some of the items ten years old. The Calcutta firm with which he had left sufficient to meet this claim failed. Worn out with illness and anxiety, Raffles died suddenly of apoplexy in 1826.

JOHN LEYDEN (1775–1811), the son of Scotch peasants, came to Madras as an assistant surgeon. Already his literary tastes had made him the friend of Sir Walter Scott. After spending three months with Raffles in Penang, he translated very inaccurately "The Malay Annals" and wrote a paper "On the Languages and Literature of the Indo-Chinese Nations." "His Oriental erudition, more particularly as relating to Malay literature, was more multifarious and surprising than accurate, as might be expected from the number and rapidity of his acquisitions." Returning to India he became Professor of Hindustani at the College of Fort Williams. He accompanied Lord Minto to Java and died of fever there at Fort Cornelis.

Interested in every subject of scientific interest in the Malayan region, Raffles found a place for several well-known naturalists on his staff. In 1818 he secured the services of the botanist WILLIAM JACK of Aberdeen (1795–1822), then a surgeon under the East India Company. Raffles left Lady Raffles in his charge at Penang, while he himself proceeded to found Singapore and later went on a tedious mission to Acheen. After that Jack accompanied his patron on a visit to Singapore in 1819 and then to Bencoolen, where he died from lung trouble and malaria. Jack's chief work was his "Malayan Miscellanies," printed in Bencoolen and reprinted later in "Essays on Indo-China." Another famous botanist friend of Raffles was the Dane NATHANIEL WALLICH (1786–1854), first a surgeon in the Danish settlement at Serampore and later Superintendent of the Botanic Gardens, Calcutta. In 1822 he applied for sick leave to go to China but spent all his time botanising in Singapore. Raffles, who had known him for several years, put him on a committee to advise if the southern bank of the Singapore river was suitable, from a hygienic point of view, for building. Wallich advised Raffles to establish Botanic Gardens in his new city, which accordingly were opened on the slopes of Fort Canning across Orchard Road and up to Mount Sophia, but abandoned in 1829 probably because the monthly vote of \$60 for upkeep was insufficient.

From 1823 to 1826 Singapore was administered by JOHN CRAWFURD (1783–1868), who left Edinburgh to become an army surgeon in India, was transferred in 1808 to Penang, accompanied

Lord Minto's expedition to Java, and was subsequently employed as Resident of Jokjakarta and on political missions to Bali and the Celebes. In 1820 he wrote a "History of the Indian Archipelago." In 1821 the Marquis of Hastings sent him as envoy to Siam and Cochin China. After he left Singapore Crawford was employed on a



JOHN CRAWFORD.

mission to Ava. He retired in 1827, and wrote twenty-five years later "A Grammar and Dictionary of the Malay Language," and "A Descriptive Dictionary of the Indian Islands," the first encyclopædia of the Malay Archipelago and Peninsula, besides many papers on ethnology, and anonymously "Suggestions for the future Administration of the British Colonies in the Straits of Malacca."

Though his theories have all been superseded (including his *dictum* that sheep would not flourish in Australia), he collected a vast amount of valuable material. Malacca also produced a Malay scholar in Captain THOMAS JOHN NEWBOLD, F.R.S. (1807-1850), who served there for three years (1832-1835) in the East India Company's 23rd Madras Light Infantry, and mastered enough Malay under the tuition of Munshi Abdullah to write a book on "The British Settlements in the Straits of Malacca," a work excellent in its day and still valuable for reference. He travelled largely in Arabia and Asia Minor, became Assistant Resident at Hyderabad, and died at Mahableswar in 1850. Another soldier, Captain BEBBIE of the Madras Artillery, took part in the Naning War and wrote an account of it in his book on "The Malay Peninsula." But the next of the scholarly school of Raffles, Crawford and Newbold was JAMES RICHARDSON LOGAN, who came to the Straits as a member of the Bar in the thirties, settling in Penang, where he also edited the *Penang Gazette*. An eager scholar, we hear of him in a Tamil shop questioning its owner on the names and uses of his commodities; on St. John's Mount in Malacca, watching the sunset and talking of his greatest project, the now scarce *Journal of the Indian Archipelago and Eastern Asia* which he edited single-handed for eight years; at the mouth of the Johore river in a storm perched on the powder canister of a gunboat and studying Dutch by a flickering lamp. He was the first student to guess a connection between a group of languages on the mainland of Asia and those of the Archipelago, a synthesis later corroborated and defined by an Austrian scholar, Father Schmidt, who has named them the Austro-Asiatic and Austronesian groups respectively. Through Logan's representations Lord Palmerston was persuaded to oppose the spread of Holland's influence in Sumatra and several Dutch ports on the east coast of Sumatra were closed in 1843. Logan died at Penang in 1869 as notary public at the Supreme Court. The Malay Peninsula inspired a French scholar, PIERRE ETIENNE LAZARE FAVRE (born 1812), for thirteen years a Catholic priest at Malacca, until ill-health drove him home and he succeeded Dulaurier as Professor of Malay at the "École des langues orientales vivantes" at Paris. His chief works are "An Account of the Wild Tribes inhabiting the Malayan Peninsula, Sumatra, etc., with a Journey in Johore and a Journey in the Menangkabau States of the Malayan Peninsula" (Paris, 1865), and grammars and dictionaries of the Malay and of the Javanese languages. His Malay grammar and

dictionary, though they lack a sense of idiom and display insufficient knowledge of the meaning of many words, are memorable and useful works; his Javanese studies were less important. A notable contributor to Logan's *Journal* was Lieutenant-Colonel JAMES LOW, who translated the "Kedah Annals" and wrote on the archaeological remains of Province Wellesley: he was stationed mainly in Penang until 1850, where he was magistrate and chief of police. Another soldier author was Major McNAIR, once Colonial Engineer and Acting Colonial Secretary, who wrote a book, "Prisoners their own Warders," on the then famous convict system of the Colony, and another work, "Perak and the Malays," from experience gained as Chief Commissioner during the Perak War in 1875. The Deputy Commissioner was SIR WILLIAM EDWARD MAXWELL, second son of SIR PETER BENSON MAXWELL (1816-1893) the first Chief Justice of the Straits Settlements and a well-known pamphleteer. William Maxwell's most notable official work was the reform of the land system in the Colony and the introduction of a land system, that still obtains in the Federated Malay States and has been taken as a model for land work in the Protected States. From the post of Colonial Secretary, Singapore, he was promoted (1894) to be Governor of the Gold Coast, where after the Ashanti Expedition he contracted black-water fever and died at sea in 1897. He is known to generations of students of Malay as the author of an excellent "Manual of the Malay Language," but he also contributed a great number of valuable papers on the history, law, folk-lore and customs of the Malays to the *Journal of the Straits Branch of the Royal Asiatic Society*.

Maxwell was the first of a brilliant band of Straits Settlements officials who were promoted from Residencies in the Malay States to Governorships—Sir E. M. Merewether, Resident of Selangor, 1902, to be Governor of Sierra Leone and later of the Leeward Islands; Sir Walter Egerton, Resident of Negri Sembilan (1902-1904), to be Governor of Lagos and later of British Guiana; Sir Frank Swettenham, G.C.M.G., Resident of Perak, Resident-General of the Federated Malay States and Governor of the Straits Settlements; Mr. R. J. Wilkinson, C.M.G., Resident of Negri Sembilan (1911), Colonial Secretary of the Straits Settlements and Governor of Sierra Leone. And there were other officers who, entering the Civil Service of the Malay States, became Residents and afterwards Governors—Sir John Rodger, Governor of the Gold Coast, Sir Hugh Clifford, G.C.M.G., Governor of the Gold Coast and

Governor-General of Nigeria, Sir Conway Belfield, Governor of British East Africa. Several of these were men of the same literary ability which distinguished Raffles, Crawford and William Maxwell.



SIR WILLIAM MAXWELL, K.C.M.G.

Sir Hugh Clifford has written "In Court and Kampong," "Studies in Brown Humanity," "A Corner of Asia," and many other tales of Malay life; Sir Frank Swettenham has written "Malay Sketches,"

"The Real Malay," and a valuable account of "British Malaya"; Mr. Wilkinson is the author of a "Malay-English Dictionary" and of a pamphlet on "Malay Beliefs," and the editor and part author of a series of "Papers on Malay Subjects." But perhaps the greatest administrator of a Malay Native State and certainly the pioneer of the prosperity of the Federated Malay States was SIR HUGH LOW, G.C.M.G. (died 1906), Resident of Perak from 1877 to 1889 (*vide* p. 149), "who reimported into the Peninsula from Borneo the cult of dealing with Malays, which had been transmitted to him from Stamford Raffles through the first Raja Brooke." Miss Isabella Bird, the well-known traveller, has written in her book, "The Golden Chersonese," of a visit to Perak in the days of Maxwell and Low.

Of Governors of the Crown Colony, the first with a great personality and career was Major-General SIR ANDREW CLARKE (1873-1875). "Lord Kimberley gave him the right to open the door of the Malay Peninsula; he even suggested where he might find the key. The permission was entrusted to the right man, and Sir Andrew put the key to the lock, opened the door and left the rest to his agents and successors." He had an excellent manner with natives, and was a good judge of men. As the founder of the Federated Malay States, he deserves a place next to Raffles and Light. The next Governor to take a statesmanlike interest in the Malay States and to use an attractive personality to win the loyalty of rulers and chiefs was SIR FREDERICK ALOYSIUS WELD (1880-1887), who before he came to Malaya had been Governor of West Australia and of Tasmania and at one time Prime Minister of New Zealand. Like Sir Andrew, he had an eye for efficient subordinates to carry out his policy. His successor, SIR CECIL CLEMENTI SMITH (1887-1893), advocated federation and railway development and the education of Malays for Government service. Also he passed an Ordinance against Chinese Secret Societies and appointed a Chinese Advisory Board. He was an administrator to whose merits justice has hardly been done. The actual Federation of the Malay States took place during the Governorship of Lieutenant-Colonel SIR CHARLES MITCHELL (1894-1899), who had the rare honour of being a popular economist. On his death in Singapore he was succeeded by SIR FRANK SWETTENHAM (1901-1903), the only Governor whose career had been spent entirely in the Malayan Civil Service, and whose name will be always associated with the Federation of the Malay States. SIR JOHN ANDERSON'S (1904-1911) governorship

was crowded with notable events—the expropriation of Tanjong Pagar Dock, the fixing of the dollar at 2s. 4d., the creation of a judiciary for the Malay States, and of a Government Monopolies Department for the Colony.

Malay names on the roll of honour are few, partly because Malay literary works are nearly all by anonymous authors. One of the finest of all Malay books, the “*Malay Annals*,” was written in Johore about A.D. 1612 by TUN SRI LANANG, of the great house of the Bendaharas of old Malacca. The author of the tale of Hang Tuah, the Malacca warrior, is unknown. MUNSHI ABDULLAH (1796–1854) wrote several well-known Malay works (p. 100), of which his *Autobiography*, preserving pictures of Lord Minto, Raffles, Farquhar and Crawford, is the most famous. He was of Arab and Tamil descent, but his father, as well as being a trader and sea-captain, was an expert Malay letter-writer and had been the teacher of William Marsden, the Malay lexicographer and grammarian, just as the son became the teacher of Raffles. Most travellers’ tales of Singapore in the eighties contain references to the hospitality of ABUBAKAR, first Temenggong, then Maharaja and finally (in 1885) Sultan of Johore, one of the most loyal and progressive of Malay rulers, who died in London in 1895. Of rulers in the Federated Malay States, the prince who played the greatest part in promoting federation was Sultan IDRIS (d. 1916) of Perak, the friend of Sir Hugh Low and Sir Frank Swettenham: it was he, too, who proposed the gift to the British Empire of the battleship H.M.S. *Malaya*, which took part in the Battle of Jutland in the Great War.

APPENDIX

BY DR. FOY WORTHY

BELOW are given a few notes on the woods mentioned in the chapter on Forests:

(a) DIPTEROCARPS.

Chěngal (*Balanocarpus* spp.).—Hard, strong, heavy, durable; brownish-yellow, becoming darker on exposure to the air. Widely distributed and formerly common. The standard wood for heavy structural work and sleepers.

Kapor (*Dryobalanops* spp.).—Very like *kěruing* but not so coarse-grained, and with a strong camphor-like odour when freshly cut. Very abundant in certain widely separated and limited areas.

Kěruing (*Dipterocarpus* spp.).—Moderately hard and moderately heavy, stiff, strong, and coarse-grained; greyish-red; not durable in contact with the ground. Very abundant. Suitable for heavy structural work and, if treated with a preservative, for sleepers. Apparently it makes up as much as 15 per cent. of the volume of wood produced in the Peninsula.

Měranti (*Shorea* spp.).—Soft, light, and coarse-grained; yellow to pink or red in colour; not durable in contact with the ground. The most abundant wood in the country, and the most widely used for planking and light or temporary structures; occasionally well figured and suitable for veneers. It makes up as much as 20 per cent. of the volume of wood produced in the Peninsula.

Měranti Pahang (*Shorea* spp.).—A hard and heavy dark red wood similar in structure to *rěsak*. Widely distributed but not abundant. Used for boat-building and planks.

Měrawan (*Hopea* spp.).—Moderately hard and moderately heavy; pale yellowish-brown. Very like *rěsak* in structure and appearance, but lighter in weight and colour and weaker and less durable. Trees usually rather small. Very widely distributed. Useful for furniture and light structural work.

Rěsak (*Isoptera borneensis*, Scheff.) and several species of *Shorea*, *Hopea*, and *Vatica*. It has not such a good reputation as *chěngal*, but is harder, heavier, and stronger. Widely distributed and known also as *balau*, *chěngal pasir*, *giam*, *kumus*, *sělimbar* and *sěngkawang* according to the species or to the localities producing it.

Sěraya (Shorea Curtisii, Dyer).—Soft to moderately hard, and light to moderately heavy; dark red. Very like *měranti*, but finer grained. Common and widely distributed. Used for the same purposes as *měranti*, and for light furniture.

(b) OTHER IMPORTANT WOODS.

Bintangor (Calophyllum spp.).—Soft, light, pink, and not durable if exposed to the weather. Common and widely distributed. Used for masts and spars and for furniture.

Kělat (Eugenia spp.).—Moderately hard and moderately heavy; grey to reddish; rather coarse-grained. Very widely distributed. Large trees furnish wood of good quality, but wood from the smaller trees is often suitable only for fuel.

Kěledang (Artocarpus lanceaefolia, Roxb.).—Moderately hard to hard, moderately heavy, coarse-grained and durable; yellow. Widely distributed but not abundant. Used for Chinese coffins.

Kěmpas (Koompassia malaccensis, Maing.).—Very hard, heavy to very heavy, coarse-grained, and not durable in contact with the ground; bright red. Widely distributed and fairly abundant. Used for shingles and charcoal.

Kulim (Scorodocarpus borneensis, Becc.).—Very like *pětaling* but harder, heavier, and darker in colour, and with a disagreeable odour of garlic when first cut.

Mědang (various species of *Lauraceæ*).—Soft to moderately hard, light to moderately heavy, fine grained, with a greasy or waxy feeling, and usually with a faintly aromatic odour; yellow to brownish. Widely distributed and common. Suitable for furniture.

Měrbau (Intsia [Afzelia] spp.).—Very hard and very heavy, strong and very durable, dark brown. Widely distributed but not abundant. Used for sleepers, heavy construction, and furniture.

Nyatoth (Palaquium spp. and Payena spp.).—Soft to moderately hard, light to moderately heavy; coarse-grained, neither strong nor durable; pink. Widely distributed and abundant. Used for the same purposes as *měranti*.

Pěnaga (Mesua ferrea, L.).—Very hard, very heavy, fine-grained; very strong and very durable; dark red or red-brown. Widely distributed but not abundant.

Pětaling (Ochanostachys amentacea, Mast.).—Hard and heavy, fine-grained, fairly strong, durable; brownish-red. Very widely distributed and fairly common. Prized for house-posts.

Punggai (Cælostegia Griffithii, Mast.).—Soft, light, cross-grained, not durable; orange-red. Widely distributed and common. Used for Chinese coffins and clogs.

Rěngas (Melanorrhæa spp.).—Moderately hard to hard, heavy to very heavy, coarse-grained, durable; bright red. Widely distributed and not abundant. Used for fine furniture. Apt, especially when freshly cut, to cause very severe irritation of the skin accompanied by swelling.

Sěpětir (*Sindora* spp.).—Soft, light, rather fine and smooth-grained, and neither strong nor durable; yellowish-brown. Widely distributed and common. Used for planks and furniture.

Simpoh (*Dillenia* spp. and *Wormia* spp.).—Moderately hard and moderately heavy, very coarse-grained, and not durable in contact with the ground; pink. Widely distributed but not abundant. Used for planks.

Těmbysu (*Fagraea* spp.).—Very hard and very heavy, coarse-grained, strong, and very durable; yellow with a distinct acid odour. Widely distributed but not abundant. Used for sleepers, heavy structural work, and furniture.

Těmpinis (*Slætia* spp.).—Very hard, very heavy, fine-grained, and very durable; rather elastic and probably the strongest wood in the country; yellow to red-brown. Widely distributed but not abundant. Used for axe handles and house-posts.

BIBLIOGRAPHY

- ABDULLAH BIN ABDUL-KADIR, Autobiography of. Shellabear's Malay text. Singapore, 1907-8.
- ANNANDALE, NELSON, and H. C. ROBINSON: Fasciculi Malayenses. London, 1903.
- BARBOSA, The Book of Duarte. Two vols. Hakluyt Society, London.
- BEGBIE, CAPTAIN P. J.: The Malayan Peninsula. Vepery Mission Press, 1834.
- BERG, VAN DEN: Hadramaut and the Arab Colonies in the Indian Archipelago. Translated by Sealey. Bombay, 1887.
- BLAGDEN, C. O.: The Medieval Chronology of Malacca, *Actes du XI^e Congrès International des Orientalists*, Paris, 1897, 2^e section: Langues et Archéologie de l'Extrême-Orient. Paris, 1898, pp. 239-53.
- Vide* SKEAT.
- BLAND, R. N.: Historical Tombstones of Malacca. London, 1905.
- BLEEKER, DR. P.: Atlas Ichthyologique des Indes Orientales Néerlandaises. Nine vols. 1862-78.
- BOULGER, D. C.: The Life of Sir Stamford Raffles. London, 1897.
- BRANDSTETTER, R.: An Introduction to Indonesian Linguistics. Royal Asiatic Society's Monographs, vol. xv. London, 1916.
- BUCKLEY, C. B.: An Anecdotal History of Singapore. Two vols. Singapore, 1902.
- CANTOR, DR. T.: Catalogue of Malayan Fishes, *Journal of the Asiatic Society of Bengal*, 1849.
- COEDÈS, M. G.: Le Royaume de Crivijaya, *Bulletin de l'École Française d'Extrême-Orient*, 1918.
- CUBITT, G. E. S.: Forestry in the Malay Peninsula. Kuala Lumpur, 1920.
- DALBOQUERQUE: The Commentaries of the Great. Hakluyt Society, London.
- DANVERS, F. C.: The Portuguese in India. Two vols.
- DUNCKER, G.: Die Fische der Malayischen Halbinsel. Hamburg, 1904.
- ENCYCLOPÆDIA, The, of Islam. Edited by Houtsma, Arnold, and others. Nos. 1-25. 1908-19. Luzac, London.

ENCYCLOPÆDIE van Nederlandsch-Indië. Four vols. Second edition. Leiden, 1917-21.

EREDIA, GODINHA DE: Malacca, l'Inde méridionale et le Cathay. Edited by Léon Jaussen. Brussels, 1882.

ESSAYS relating to Indo-China. Two series, 4 vols. London, 1886-87.

EVANS, I. H. V.: Vide *Journal of the Federated Malay States Museums*.

FERRAND, M. G.: Malaka, le Malayu et Malayur, *Journal Asiatique*, xi serie, t. xi., no. 3.

FINOT, M. L.: Inscriptions du Siam et de la Péninsule Malaise, *Bulletin de la Commission archéologie de l'Indochine*, 1910.

FOXWORTHY, F. W.: Commercial Woods of the Malay Peninsula, *Malayan Science Bulletin*, No. 1. Kuala Lumpor, 1921.

GERINI, COLONEL G. E.: Researches on Ptolemy's Geography. Asiatic Society Monographs. London, 1909.

GRAHAM, W. A.: Kelantan. MacLehose.

GREENTREE, R., and NICHOLSON, E. W. B.: Catalogue of Malay Manuscripts in the Bodleian Library. Oxford, 1910.

GURDON, LIEUT.-COLONEL P. R. T.: The Khasis. London, 1914.

IBN BATOUTAH: Voyages. Four vols. Paris, 1853-58.

I-TSING, translated by J. Takakusu. Oxford, 1896.

Journal of the Anthropological Institute of Great Britain and Ireland.

Journal of the Federated Malay States Museums. Kuala Lumpor, 1906-21.

Journal of the Indian Archipelago (Logan's Journal). Singapore, 1847-62.

Journal of the Royal Asiatic Society. London.

Journal of the Straits Branch of the Royal Asiatic Society. Singapore, 1878-1922.

JUYNBOLL, DR. H. H.: Catalogus van de Maleische en Sundaneesche Handschriften der Leidsche Universiteits-Bibliotheek. Leiden, 1899.

KING, SIR G.: Materials for a Flora of the Malay Peninsula, *Journal of the Asiatic Society of Bengal*, 1889-1915.

LEYDEN, DR. JOHN: Malay Annals. London, 1821.

LOVAT, ALICE, Lady: Life of Sir Frederick Weld. London, 1914.

MALAY Literature Series, i.-xvi. Singapore. (It contains, among others, texts edited by Shellabear and by Winstedt.)

MARTIN, DR. R.: Die Inlandstämme der Malayischen Halbinsel. Jena.

MAXWELL, C. N.: Malayan Fishes, *Journal of the Straits Branch of the Royal Asiatic Society*, No. 84. Singapore, 1921.

MAXWELL, W. G.: In Malay Forests. Edinburgh.

McNAIR, MAJOR F.: Perak and the Malays. London, 1886.

MORGAN, J. DE: L'âge de la pierre polie dans la presquile Malaise, *L'Homme*, t. ii., p. 494.

- NEWBOLD, T. J.: Political and Statistical Account of the British Settlements in the Straits of Malacca. Two vols. London, 1839.
- PAPERS on Malay Subjects, First and Second Series, published by the Committee for Malay Studies, Federated Malay States. Twenty-one vols. Kuala Lumpur, 1907-21.
- PELLIOT, PAUL: Deux itinéraires de Chine en Inde à la fin du *viii^e* siècle, *Bulletin de l'École Française d'Extrême-Orient*, t. iv., 1904.
- REPORTS: Annual Administrations of the Colonial Secretary of the Straits Settlements, the Chief Secretary of the Federated Malay States, the British Residents of the Federated Malay States, the Advisers of the Unfederated Malay States, and of the Heads of Government Departments.
Census, 1921. By J. E. Nathan. (In the press.)
- RIDLEY, H. N., C.M.G., F.R.S.: Materials for a Flora of the Malayan Peninsula. Three parts. Singapore, 1907-8.
- ROCKHILL: Notes on the Relations and Trade of China with the Eastern Archipelago and the Coast of the Indian Ocean during the Fourteenth Century, *T'oung Pao*, t. xvi., 1915.
- RONKEL, DR. PH. S. VAN: Catalogus der Maleische Handschriften in het Museum van het Bataviaasch Genootschap. The Hague, 1909.
Supplement-Catalogus der Maleische en Minangkabausche Handschriften in de Leidsche Universiteits-Bibliotheek. Leiden, 1921.
- SCHMIDT, PATER. Les Peuples Mon-Khmer, trait d'union entre les peuples de l'Asie centrale et de l'Austronésie, *Bulletin de l'École Française d'Extrême-Orient*, t. vii., 3 and 4.
- SCHRIEKE, B. J. O.: Het Boek van Bonang. Utrecht, 1916.
- SHELLABEAR, W. G.: The Autobiography of Munshi Abdullah. Singapore, 1918.
Séjarah Melayu or "Malay Annals." Two vols. Malay Literature Series.
- SINGAPORE, One Hundred Years of. London, 1921.
- SKEAT, W.: Malay Magic. London, 1900.
Fables and Folk-Tales from an Eastern Forest. Cambridge, 1901.
- SKEAT and C. O. BLAGDEN: Pagan Races of the Malay Peninsula. Two vols. London, 1906.
- SNOUCK HURGRONJE, DR. C.: The Achehnese. Two vols. Leiden, 1906.
- STEWART, E. A.: The Life of St. Francis Xavier. London.
- SWETTENHAM, SIR FRANK, G.C.M.G.: British Malaya. London, 1907
Tijdschrift voor Indische Taal Land en-Volkenkunde van het Bataviaasch Genootschap van Kunsten en Wetenschappen.
- TREATIES and Engagements entered into with or affecting the Native States of the Malay Peninsula. Singapore, 1889.
- TWENTIETH-CENTURY Impressions of British Malaya. Edited by Arnold Wright. London, 1908.

Verhandelingen van het Bataviaasch^e Genootschap van Kunsten en Wetenschappen. Batavia and The Hague.

WILKINSON, R. J., C.M.G.: *A Malay English Dictionary.* Three parts. Singapore, 1902.

An Abridged Malay-English Dictionary. Second edition. Singapore, 1919.

Malay Beliefs. Leiden, 1906.

A History of the Peninsular Malays. Second edition, revised. Singapore, 1920.

The Incidents of Malay Life. Second edition, revised. Singapore, 1920.

Vide also Papers on Malay Subjects.

WINSTEDT, R. O., M.A., D.Litt. (Oxon.): *An English-Malay Dictionary.* Second edition. Singapore, 1922.

A Dictionary of Colloquial Malay, Malay-English and English-Malay. Singapore, 1920.

Colloquial Malay. Second edition. Singapore, 1920.

Malay Grammar. Oxford, 1913.

Malayan Memories. Singapore, 1916.

Vide also Papers on Malay Subjects, Malay Literature Series, and Journal of the Straits Branch of the Royal Asiatic Society.

WINSTEDT and C. O. BLAGDEN: *A Malay Reader.* Oxford, 1917.

WRIGHT, A., and T. H. REID: *The Malay Peninsula.* London, 1912.

SUBJECT INDEX

A

- ABORIGINES, 79; negritos, 80; Sakais, 80, 81, 82; mixed Besisi, 82; Proto-Malays, 82, 83, 84, 85, 86
- ADMINISTRATION, of the Straits Settlements, 168, 169, 170; of the Federated Malay States, 171, 172, 173, 174; of the Unfederated Malay States, 251, 254, 255, 258, 260
- AGRICULTURE: staple products, 195; soils, 197, 198; labour, 198, 199; African oil palm, 200; fibre plants, 200; limes, starch-yielding crops, *nipah* palms, gutta-percha, tea, tapioca, pineapples, 201; gambier, coffee, castor-oil, patchouli, citronella and lemon grass, 202; gingelly, ground-nuts, cocaine plant, cinchona, tuba, sago palm, sugar-cane, 203; fruits, cereals, chillies, ginger, turmeric, betel-nut, 205; cinnamon, cloves, pepper, 206
- ANIMISM, of the Malays, 101
- ARAB: in the Peninsula, 125; influence of, 95, 96, 97, 100, 105, 131
- ARCHAEOLOGICAL remains: prehistoric, 153, 154, 155, 156; Hindu, 157, 158, 159, 160; Muhammadan, 160, 161, 162, 163, 164, 165; Portuguese, 165, 166; Dutch, 167
- ART, Malay: basketry and mat-making, 108; weaving, 109; metal-work, 109, 110, 111, 112, 113; weapons, 113, 114; wood-carving, embroidery, lace, 115

B

- BELIEFS, Malay, 101, 102, 103, 104, 105, 106, 107
- BRITISH: early traffic with the Archipelago, 140; found Penang, 141, acquire Province Wellesley, 141, 142; occupy Malacca, 142, 143; found Singapore, 143, 144, 145, 146; relations with the Malay States, 146, 147, 148, 149, 150, 151, 152
- BUDDHIST, traces in the Peninsula, 126, 127, 157, 158

C

- CELEBRITIES D'Albuquerque, Camoens, 261; S. Francis Xavier, 261, 262; J. van Riebeeck, H. N. van der Tuuk, 262; R. Fitch, J. Lancaster, F. Light, 263; S. Raffles, 263, 264, 265, 266; J. Leyden, W. Jack, N. Wallich, 266; J. Crawford, 266, 267, 268; T. J. Newbold, Captain Begbie, J. R. Logan, P. E. L. Favie, 268; J. Low, Major McNair, Sir W. E. Maxwell, 269; Sir H. Clifford, 269, 270; Sir F. Swettenham, 269, 270; R. J. Wilkinson, 269, 271; Sir H. Low, Sir A. Clarke, Sir F. A. Weld, Sir C. C. Smith, Sir C. Mitchell, Sir J. Anderson, 271; Tun Sri Lanang, Munshi Abdullah, Sultan Abubakar, Sultan Idris, 272
- CHINESE early intercourse with Malaya, 108, 115, 116, 126, 127, 129, 130, 131, 247, 257, 260; immigration, occupations and characteristics of the, 77, 78, 117, 118, 119, 120, 121; mining riots in Perak, 146, 147; as miners, 185, 186, 187, 189, 190; agriculturists, 198, 199, 201, 202; manufacturers, 207, 208, 209, 210; fishermen, 217, 219
- CLIMATE: rainfall, 21, 22, 23, 24; temperature, 24; winds, 24, 25
- COMMERCE of the Straits Settlements, 177, 179, 180, 181; of the Federated Malay States, 180, 182, 183; of the Unfederated Malay States, 251, 253, 254, 255, 257, 259
- COMMUNICATIONS: old trade routes, 220; roads, 220, 221, 222; railways, 222, 223
- CRAFTS. *See* Arts

D

- DUTCH, ascendancy of the, 136, 137, 138, 139, 140, 143, 144, 145, 251; early trade routes, 220; celebrities, 262, 263. *See* Archaeological remains

E

EURASIANS, 76, 124
EXPENDITURE, 175, 176

F

FAUNA: vertebrates, 47-70; invertebrates, 70, 71, 72
FISHES, Sea-, 213, 214, 215; enemies of, 217, 218
FISHING, methods of sea-, 216, 217; extent of industry, 219
FLORA, 35, 36. *See* Forests
FORESTS, inland, 36, 37, 38; special types of, 39, 40, 41; area of the, 41, 42; composition of the, 42, 43; minor products of, 43, 44, 45, 46; revenue from, 45, 46
FRUITS, 203, 204

G

GEOGRAPHY. *See* Malay Peninsula
GEOLOGY, 26, 27, 28, 29, 30

H

HINDU. *See* India
HISTORY: the Sumatran (Palembang) ascendancy, 126, 127; early, of Kedah, 127, 128; of Singapore, 127, 129; of Johore, 128, 129; the ascendancy of Java (Majapahit), 129; early Malacca, 129, 130, 131, 132; the coming of Islam, 131; the Portuguese ascendancy, 133, 134, 135; the Spaniards, 135, 136; the Dutch ascendancy, 136, 137, 138, 139, 140, 143, 144, 145; the British and the Straits Settlements, 140, 141, 142, 143, 144, 145; British relations with the Malay States, 146, 147, 148, 149, 150, 151, 152. *See* Archaeological remains
HOLLAND. *See* Dutch

I

INDIA, early relations of, with Malaya, 121, 126, 127, 131, 132; influence of, on the Malay house, 92; on language, 94, 95; on literature, 97, 98, 99; on beliefs, 102, 103, 104, 121; on religion, 105; on art, 109, 111, 114, 115; on antiquities, 157, 158, 159, 160, 161
INDIAN immigrants, 78, 79
INDUSTRIES: manufacture of tin, rubber, coir, copra, 207; of oils, 207, 208; pineapple canning, 208; tapioca, tanning, samsu, toddy, sugar, 209; cigars, rice, thatching, lime-juice, rattan articles, timber, matches, 210; porcelain and pottery, 210, 211; sand-lime bricks, cement, marble, glassware, 212

J

JAVA, ascendancy of, in the Peninsula, 129
JOHORE, 249, 250, 251

K

KEDAH, 252, 253, 254
KELANTAN, 255, 256, 257, 258

L

LANGUAGE, of aborigines, 93; the Malay, 93, 94, 95, 96
LAW, Malay, 107
LITERATURE, Malay, 97, 98, 99, 100

M

MALACCA, continental use of the word, 1; early history of, 129, 130, 131, 132; under Portuguese rule, 134, 135; under Dutch, 137, 140; under British, 142, 143, 144, 145, 146; antiquities of, 160, 161, 162, 163
MALAY Peninsula, area, boundaries and divisions, 1, 2, 3; mountains and hills, 3, 4, 5, 6, 7; limestone hills, 7, 8; rivers, 8, 9, 10, 11, 12; lagoons and lakes, islands, Cameron's plateau, 13; scenery, 13, 14, 15, 16, 17, 18, 19, 20
MALAYA, origin and use of the term, 1
MALAYS: population, 74, 75, 76, 77; race, 82, 83, 84, 85, 86; modern Peninsular, 86, 87, 88, 89, 90; dress of, 91; houses of the, 91, 92; language of the, 93, 94, 95, 96; literature of the, 97, 98, 99, 100; beliefs and religion of, 101, 102, 103, 104, 105, 106, 107; arts and crafts of, 108, 109, 110, 111, 112, 113, 114, 115
MALAYU, origin of the word, 1, 126
MATRIARCHY, in Negri Sembilan, 107
MINERALS: tin, 31; tungsten ores, gold, 32; miscellaneous ores, 33, 34
MINING, gold, 184, 185; tin, 185, 186, 187, 188, 189, 190, 191, 192, 193; tungsten ores, coal, 194
MUHAMMADANISM, advent of, 131, 132; type of, 103, 104, 105, 106, 107

N

NANING WAR, 143
NEGRI SEMBILAN, protectorate over, 150, 151; the State, 241, 242, 243, 244, 245
NEGRITOES, 80; language of, 93

P

PAHANG, protectorate over, 151; the State, 245, 246, 247, 248
PENANG, 140, 141, 142, 227, 228, 229

SUBJECT INDEX

283

PERAK, protectorate over, 146, 147,
 148, 149; the State, 233, 234, 235, 236,
 237, 238
 PERLIS, 152, 254, 255
 POPULATION: total, 73, 74, 75; by
 immigration, 73; by races, 76, 77,
 78, 79
 PORTS, principal, 12, 177, 180
 PORTUGUESE, ascendancy of the, 132,
 133, 134, 135, 136; influence on the
 Malay language, 95
 PROTO-MALAYS, the, 82, 83, 84, 85, 86
 PROVINCE WELLESLEY, 141, 142, 228,
 229

R

RACES: aboriginal, 80, 81, 82; Malay,
 83, 84, 85, 86, 87, 88, 89, 90; Chinese,
 116, 117, 118, 119, 120, 121; Indian,
 121, 122, 123; Siamese, 124; Eura-
 sians, 124; Arabs, 125; Jews, 125;
 Filipinos, 125

RAILWAYS, 222, 223
 RELIGION of the Malays, 102, 103, 104,
 105, 106, 107
 REVENUE, 175
 ROADS, 220, 221, 222

S

SAKAIS, 80, 81, 82. *See* Aborigines
 SELANGOR, 149, 150, 239, 240, 241
 SHIPPING, 177, 179, 180, 183
 SINGAPORE, early history of, 127, 129;
 the Settlement, 224, 225, 226
 SPAIN and the Malay Archipelago, 135,
 136

T

TAMILS. *See* Indians
 TIMBERS, Malayan, 42, 43, 273, 274,
 275
 TRADE, 177, 179, 180, 181, 182, 183
 TRENGGANU, 258, 259, 260

